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The American Farmer.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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VOL. X.—No. 5.] MAY, 1881. [NEW SERIES.

The Cultivation of Corn.

The Deer Creek Farmers' Club met last week at the residence of Mr. James Lee, Mr. George E. Silver, President, in the chair, and Wm. D. Lee, Sec'y. Mr. Lee's stock and premises were duly examined by the club in a body, and upon reassembling the committee of inspection, Messrs. Watters, William F. Hays and Johns H. Janney, reported, through Judge Watters, who said that wherever the club went they could find some things to imitate and some to avoid; but he did not know of any place where farmers could see more to imitate and learn than at Mr. Lee's.—They particularly noticed the skillful and economical management of labor. They knew of no farm where the same number of hands accomplished as much work, without seeming to work earlier, later or harder than on other farms. Mr. Lee is preparing to plant a small crop of tobacco, which is going to be an important interest in Harford county. There is more profit in it than in any industry within our reach, and it don't require to be very near a railroad.

Mr. Lee has thirty head of cattle in his stables, in fine condition, showing great care and good attention. A lot of cattle to be kept over next summer also looked well. It would pay to imitate Mr, Lee's plan of buying the best quality of cattle to be had. Mr. Lee's thoroughbred Short Horns were highly praised not only by the committee but by the entire club, as being equal to the best to be found anywhere.

In reply to a question, Mr. Parker H. Lee stated that the cattle had been fed on coarse corn and cob meal ground in the barn—twelve pounds of meal and one pound of cotton seed meal a day to each steer, divided into four feeds, the cotton seed meal constituting one feed. Also cut fodder, until a few weeks ago when they were fed on hay—some cut and some long. He thought cattle were more apt to get off their feed by feeding on fine corn and cob meal than on coarse. He thought grinding or crushing the cob with the corn a great advantage.

The subject for discussion was

The Corn Crop.

And from our cotemporary, the *Ægis*, we take the following report:

Mr. James Lee said that the subject was suggested by a member, asking him the question: "How far does our corn crop in Harford county fall short of the present capabilities of our lands—that is, to what extent are our short crops of corn due to mismanagement? His answer to his own question was—'one-fourth.'"

If that is so, said Mr. Lee, where have we made mistakes and what is the remedy? He has a field of eighteen acres, which he has covered with stable manure this spring. The question is, would it not have been better to have applied it one year before plowing, or should it have been plowed first and then top-dressed with the manure, which could have been done as it is short. His own opinion was that it should have been spread one year in advance. If he were going to apply say four hundred pounds of bone per acre, he would sow it in the row, harrowing lightly but not enough to obliterate the row. Then the corn should be drilled in the row, so that its roots would come in immediate contact with the bone. It is not his custom to apply bone that way, but if he looked only to the corn crop he would pursue that plan. The proper working of the corn is one of the most important points in making a full crop. Some persons have an idea that once or twice is often enough to work a crop of corn, and that it should not be cultivated when the ground is dry. He thought the oftener you work it the better, not only to kill grass and weeds, but to create a moisture. It should first be cultivated as closely to the plant as possible, when there are few lateral roots to be injured, and each subsequent working should be a little farther away. Many adopt

DISCREPANCY I

a plan just the reverse of this—working just in the middle of the row and then closer each subsequent time. Consequently they cut many of the lateral roots. He preferred yellow corn for feeding, but can raise two barrels more of white corn than of yellow to the acre.

Mr. Johns H. Janney believed in preparing the ground well and thoroughly working the corn not less than three times. In sod ground he would apply stable manure one year ahead. He applies bone in the row. He would plant in drills, as soon after the 1st of May as possible, and his experience is that white corn will yield more than yellow.

Judge Watters thought that by improving the cultivation the yield could be increased one-fourth. It is practicable to raise twenty barrels by the field, and possible to raise thirty barrels. Up to a certain amount the crop may be increased by simply making the ground richer and working well. Up to say twelve or fifteen barrels to the acre, there is no difficulty about want of space above ground; but when the crop reaches eighteen or twenty barrels the growth of fodder is such that by the time the corn is in tassel it becomes a dense mass and shuts out the air and sunshine. Above that amount, the want of space above ground seems to limit the crop rather than the richness of the soil. He suggested that this difficulty might be avoided to some extent by drilling in double rows, twelve to eighteen inches apart and with a space of five feet between these double rows. This would give more stalks to the acre and still admit sunshine and allow the air to circulate through the crop. He thinks that in this way the present limit might be extended to the extent of several barrels to the acre. It might be worked with two horses, by a cultivator especially contrived for the purpose, until it was ten or twelve inches high. Stable manure pays better if put on grass a year before it is plowed for corn, but if fine it may be spread after the ground is plowed. The best way to apply bone for corn is to put it on grass the year before plowing. Two years before would be better still. He preferred dissolved bone for any special crop but except for that particular crop it does not pay as well as raw bone. He plants soon after the 1st of May as he can, never before, and prefers yellow corn for feeding purposes. His yield last year was eighteen barrels.

Mr. Thomas Lochary thought it a good plan to manure a year a head. He likes to plow and plant the same day if it could be done. He does not believe in deep plowing, being afraid to go over six or eight inches. Prefers planting in hills, on account of the difficulty of getting drilled corn properly thinned. Would leave two stalks in a hill—the hills two and a-half and the rows three and a-half feet apart. On rich ground they may be closer. He drills it in hills, working it one way. Begins to work it as soon as fairly up, and continues to work close to it until it is nearly in tassel. The last working is in the middle of the row. By better attention the corn crop could be increased at least one-fifth. Mr. Lochary wanted to know if corn with small fodder could not with propriety be planted closer than that having large fodder.

Mr. Wm. Webster advocated applying fine manure as a top dressing for corn. Long manure should be put on a year ahead. Working corn is about one-half of the means to raise a good crop. It should be commenced early and worked as long as possible, especially in dry seasons. In wet seasons a hoe must be used. In applying bone for the corn crop alone he would put it in the hill. Corn should be harrowed as soon as it appears above ground, as it is injured by allowing it to lay even one week without working. He preferred to plow not over seven inches in depth for corn. Turning up too much clay is an injury to corn. More white corn than yellow can be raised, but stock relish yellow corn more than white. His time of planting is from the 1st to the middle of May, but not until the ground gets warm. On good ground the proper distance is ten to eleven inches in the row. In reply to Mr. Lochary's question he thought with the rows three and a-half feet apart. In small corn could stand thicker than large corn.

Mr. R. John Rogers said it pays better to put out manure two, three or even four years ahead for corn, than putting it out and plowing it in at once. On strong land you will get more corn by drilling, but on our lands you are more sure of a crop by planting in hills or checkering it. You will have fewer nubbins. Drilled corn, on medium land, should stand eleven to fourteen inches in the row, and he would not plant small fodder corn any closer than the other. White corn will yield better, but is possibly harder on land. Mr. Rogers did not prefer a very early corn, because in ripening so early the hot suns injure the fodder. The depth of plowing should depend upon the quality of the land. Likes to plow his land eight inches, which he considered very deep. Stalk ground should be plowed early and harrowed so as not to settle the ground. It is also better to plow sod early, and would like a little frost on it to kill the worms and insects. Corn should be worked early and constantly until it is laid by. Last year he raised from fifteen to eighteen barrels of corn per acre.

Mr. George R. Glasgow plants with a drill about the 1st of May. As soon as the corn is up he cultivates it with a light two-horse harrow, and continues to work it until harvest. Prefers white corn, which he plants twelve inches apart in the rows, and yellow corn from eight to ten inches. Seldom uses any fertilizer except barn yard manure, on sod. The crop can be increased, he thought, by closer attention and better cultivation.

Mr. Parker H. Lee plows deep—from nine to ten inches, and deeper if he can. His plan is to plow as late as will enable him to get ready to plant from the 1st to the 15th of May. The ground should be thoroughly prepared before planting. Plants in drills three and a-half feet apart, leaving the corn twelve inches apart in the rows. Begins to work it as soon as it forms three or four leaves, with a drag harrow, thinning it at the second working. It should be worked as rapidly as possible. If you get over it in three or four days, go over it again, and do not quit it until harvest. Plants white corn, because it yields from two to three barrels more than yellow and stands the drought better. Gets it off the ground in time to seed for wheat. Replants whenever any has missed, even if it is so

CY IN PRINTING

late that he will get only a nubbin. Never suckers his corn. Prefers manuring a year ahead.

Mr. Wm. Munnikhuysen never thins his corn, but has his drill set to drop one grain every twelve to fourteen inches. If too thin he puts some in. He prefers to raise white corn, but yellow makes the best feed, and it does not get so hard as the white. He likes to plow and plant the same day, and don't believe in harrowing the ground so much as to pack it. Therefore he don't believe in early plowing. Plants from one and a-half to two inches deep. Prefers running out rows and running the drill in the rows. If he uses bone would sow it broadcast, plant the corn and harrow immediately.

Benjamin Silver, Jr., advocated plowing well and deep. Plants in hills two and a-half feet apart with the rows three and a-half feet wide—leaving two stalks to the hill. Generally plants yellow because it can be gotten off earlier than the white. Corn should be well worked. As soon as planted it should be harrowed over. Would plow directly before planting. It should be worked once a week.

Mr. Wm. F. Hays had been in the habit of plowing deep for corn, but thought only the fertile land should be turned up. The time to work corn is before you plant it. The best corn he ever raised was only worked once after it came up. Plows late and plants the first week in May. Runs the rows three feet apart and thins the corn to fifteen or sixteen inches in the row.

Mr. Bennett H. Barnes said his custom was to put manure on sod and plow as deep as possible, without turning up too much clay. Then put on enough bone dust to help both the corn and wheat. Prefers white corn because it stands drought, and selects corn with a large cob, whether yellow or white. Runs out the rows three feet ten and three feet eight inches, alternately, leaving two stalks every eighteen or twenty inches. Likes to plant the first week in May.

Mr. Harry Wilson said one great point in raising corn is to select sound seed of a good yielding variety. More white corn can be raised than yellow, and it stands the drought better, but he preferred yellow for feeding. He would plow early for corn, the depth depending upon the depth of the soil. He considered seven inches deep plowing. Where land will permit of it the best results are obtained from early plowing. He did not believe it pays to apply barn yard manure for corn after February. The crops in Harford fall short perhaps one-fourth from bad seed and bad cultivation.

Mr. Alex. Hays puts manure on one year ahead, and plants as soon after plowing as he can. Would rather apply bone in the row than sow it broadcast.

Mr. R. Harris Archer said he did not believe the estimate that our crop falls short one-fourth was correct. For corn, land should be plowed thoroughly and not harrowed too much. In thinning corn we are apt to leave it thicker than we suppose. The system of following corn with wheat is an incentive to working corn clean. He thought six or seven inches deep enough to plow. He attributed the increase in yield to the fertility of the soil, and doubted if ground is plowed better now than it used to be—although the chilled plows do the work more easily.

Mr. John Moores thought the corn crop could be increased by better farming without increasing the amount of fertilizers used. The ground should not be plowed too flat, but should be edged up, so as to get the full benefit of the richer surface soil for the crop. If he were raising a corn crop on a bet he would prefer a corn stubble that had been a sod the year before. The sod having been manured and plowed down. You will have no worms on an old sod. Corn should be manured a year or two ahead. Had always raised from two to three barrels more white than yellow corn, but he always plants some yellow, because it ripens earlier. The yellow is best for cows. Likes to work close to the corn when he begins, and as it grows work farther off. Don't thin it all out at once. Keep the ground thoroughly stirred and work it level, especially when you want to seed it. He runs out the rows with a heavy plow and sows bone, then harrows, which leaves mark enough for the drill. If planting early would plant shallow. Later planting should be deeper. The best depth is from one and a-half to two inches, with rows from three to three feet five inches apart. The stalks should be left fourteen inches in the rows. Thins from the time it comes up until harvest. Whenever a stalk is crowded he pulls it out, and pulls off all suckers.

Mr. Thomas A. Hays said Judge Watters, Mr. Webster and Mr. Lochary had expressed his ideas.

Mr. James H. Ball suggested the idea that perhaps our plowing is done too well. He had noticed fields where spots half plowed had on them better corn than where the ground was well plowed. If we could manage merely to scratch the ground so as to destroy vegetation we might get better corn, but it is a question whether it would be best for the land and for succeeding crops. He was not certain that the practice of entombing the best of our soil and our manure is of any advantage. He advocated thorough tillage after planting, but suggested that even then it might be best to cultivate shallow. If manure is buried far from the action of the atmosphere it is lost—the roots of the corn do not find it. Manure should be placed near the surface. He merely made suggestions. In practice his method of planting did not differ from that of other members of the club.

Adjourned to meet at the residence of Mr. Geo. E. Silver, May 7th.

BREEDING FROM CROSS-BRED ANIMALS.—There is always great uncertainty in breeding from cross-bred animals, the inheritance in such cases being quite as likely to take one direction as the other, and in either case frequently reverting to the original type in a very unexpected manner. The surest way is to use a thoroughbred male of some one breed, and make your own crosses. A *breed* of cattle cannot be built up in one, or even in three generations of cross-breeding, or of grading in a given direction.

—*Live Stock Journal.*

A Convenient Barn.

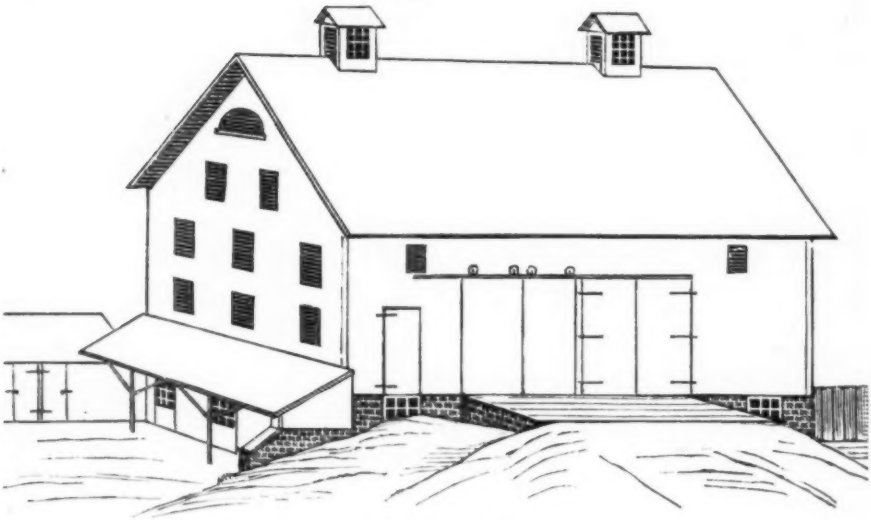


FIG. 1.—N. E. VIEW OF BARN.

Messrs. Editors American Farmer:

In compliance with your request I send a sketch and description of my barn. Before building I visited quite a number of barns in Western Maryland and neighboring States, especially in the vicinity of Philadelphia, endeavoring to find some plan that would combine convenience, simplicity, and economy of space and cost. The plan adopted was a continuation of the good points I took a fancy to in other barns, and after five years' use I am satisfied that for my purposes it is very near right.

It would probably be an advantage to have the frame higher to the square, and I am convinced that ventilators are a nuisance at the sides of mows, and some of my neighbors who have built more recently have placed mock ventilators on the outside for appearance, and are not troubled with a cubic yard of mouldy hay at each window.

Figure 1 is a northeast view of barn. The dimensions are 64x40 feet, and the frame, which rests on an eight-foot wall, is twenty feet to the square. The main floor is divided crosswise into four equal spaces—two end mows, and two driveways of sixteen feet width each. One of the latter being used as a wheat mow until after threshing, when it is very convenient as a driveway and floor. Under one of the end mows there is a granary (G) for a thousand bushels, and a feed bin of about the same capacity, and alongside of these is a room 16x20 feet, eight feet high, for chaff or cut hay. The floors are lighted by windows in the rear doors and in the cupolas. The roof is of cypress shingles, and the siding of narrow white pine, tongue and grooved together and put on vertically. The foundation was laid out on a south slope falling about six feet in the width of the barn. To insure a dry stable we only dug out four feet of this at the upper side and filled up the other two feet below to make the level, which is one of the best features about its construction, as the accumulation of manure on the yard side will never flood the stable. Besides we dug a trench for the foundation of the wall eighteen inches deep, sloping considerably towards the yard, and as over a foot of broken stones are banked against the yard wall, any water that finds its way underneath will ooze into the yard instead of into the stable.

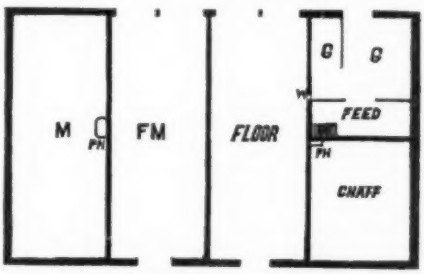


FIG. 2.—PLAN OF MAIN FLOOR.

The barn and end stable doors are on rollers. The stable doors on the yard side are on hinges and are cut in half cross-wise, that the upper half may often remain open to admit light and air. There are glass windows in all the end doors, and also four in the south and two in the north side of the stable.

A cistern under the bridge-way catches the water from the eave troughs and supplies the yard through an inch and a-half pipe. There is

also a stopcock near the mixing box in the passage-way, W. Fig. 3. There are shutes from the chaff room and feed bin to the mixing boxes on the lower floor.

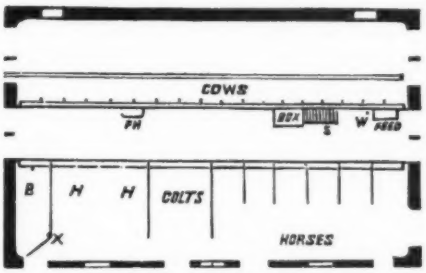


FIG. 3.—PLAN OF BASEMENT.

The passage-way is ten feet wide, with eight-foot doors at each end, so that a cart may pass through with soiling material. The steps (S) have hinges at top so they may be raised out of the way, and the mixing box is removed entirely during the soiling season. There are eight-foot doors at each end of the cow stable, also, to admit a cart for hauling the manure, though we find a wheelbarrow more suitable for our number of cattle. The wide doors on rollers, however, are a great satisfaction. The stable floors are both rat and water proof. Broken stones a foot thick, covered with narrow white oak plank laid in cement, and nailed to sawed white oak sleepers firmly imbedded in the stones, makes a very substantial job. The passage is laid with the cement without the boards.

There are stanchions for eighteen cows in the main stable. The floor they stand on is four feet nine inches wide to the gutter, which is fully four inches too wide for the average Jersey cow. Six horse stalls, a colt stable, four stanchions for breaking heifers, and a box stall for bull take up the space on the opposite side of the passage. The manure from the cow stable is wheeled into the yard through the west doors, and the cows are admitted by the same. The number of large doors on the south side facilitate the removal of manure from the stables on that side. Glass windows admit sunlight directly to the horse stable, and ventilators at each end of the passage-way gives circulation of air. When the stable is occupied with stock water will not freeze in it during the coldest weather. The bull stall is provided with strong stanchions and the door is hung at X., so that he may be turned out of doors or into the adjoining stable H. H. as wanted. The whole cost of the building, including labor of team and rating home material at market value, was a little over two thousand dollars. But just as much room can be had by using cheaper material at little over half that amount.

Montgomery Co., Md. F. THOMAS.

THE KENT CO., MD., AGRICULTURAL SOCIETY has elected the following officers: Pres., Samuel Vannort; Vice, H. T. Massey; Rec. Sec., W. T. Nicholson; Cor. Sec., F. H. Harper; Treas., J. H. Hossenger; Librarian, E. P. Janvier. The Fair for 1881 will be held September 13, 14 and 15.

Experience with Ensilage.

Messrs. Editors American Farmer:

I will give you a statement of my experience in growing and preserving corn fodder green. I was induced to make the experiment from reading a book, purchased at your office last spring, on the subject of Ensilage of Maize, written by M. Auguste Goffart. My silo is simply a pit dug in the ground, which it was my intention to have walled up, but seeing that I would not be able to get it done in time, I thought I would try it without. The dimensions of the pit are sixty feet long, six feet deep, with sloping sides, twelve feet wide at the top and ten feet at the bottom.

For the purpose of filling this pit I sowed four and a-half acres of corn in rows, three feet apart, at the rate of three pecks per acre; sowed about the middle of July, marked it out with a furrow plow, and covered with a cultivator; did not use any fertilizers; cultivated it twice and commenced cutting 1st of October. It was then in blossom and in the right condition to make ensilage. Cut it with reaper and bound it in bundles with rye straw; hauled to the feed cutter on hay carriages; set cutter at the edge of the pit so that it would throw the fodder when cut into the pit. Run the cutter with four-horse engine, cutting in one-quarter inch lengths; kept it well tramped down all the time; put a horse on to tramp after we got it filled two or three feet. Put about half a ton of straw on the bottom and about the same on top, and covered it over with a foot of earth, and built a fodder house over it all.

We opened it about the middle of November; found it spoilt about three inches on top and around the sides—lost about four or five tons in this way; it is best to have it as much in a body as possible. The less surface we have the less per cent. of loss, as some alteration will always take place on the surface. After taking three inches off the top found it looking pretty much the same as when it was put in—it is slightly acid.

Commenced feeding it to cows—they did not eat it at first with much relish, but after a day or two they became very fond of it, and would eat it in preference to the best of hay; none of them have ever yet left any in their troughs. I give them twenty pounds at a feed twice a day, and also about a bushel cut dry fodder and three quarts corn meal and wheat bran mixed twice a day on the ensilage. The cows are thoroughbred and grade Jerseys; they keep in thrifty condition, and so do the calves; had several of them to weigh over one hundred pounds at two weeks old. My fresh cows make an average of six pounds of butter per week, making it cost me for feed about twenty cents per pound, leaving the manure and skim milk to pay for labor. I don't think it affects the quality of the butter any. Will test it next winter by feeding half my cows on dry fodder and half on green fodder, giving them the same value's worth to each, keeping the milk and butter separate and sending to market in separate boxes.

If ensilage could be made without undergoing any fermentation, that is if fodder could be pre-

served without undergoing any fermentation before or after ensilaging, I think it would make better feed. This might be accomplished by putting up perpendicular walls of masonry, cementing them, and compressing the ensilage with boards and heavy weights. I will try both ways next fall.

It cost me to produce my ensilage about four dollars per ton; had about one-quarter of a mile to haul it to the pit; cost about one dollar and twenty-five cents per ton to get from the field and put it in the pit; half of this cost could have been saved by sowing the fodder near the pit, and if I had sowed my corn about the 1st of June, and sowed the largest variety of corn I could have gotten, I would have had at least double as much fodder. The same kind of ground I grew this fodder on, right by the side of it, made me fourteen barrels of good sound corn, worth one dollar and sixty cents per barrel in the field, counting the fodder to pay for harvesting. Estimating the cost of growing my green fodder by this, I have two dollars and twenty cents per ton, and twenty-five cents for conveying it from the pit to the barn. This could be saved by having the pit adjoining the barn, with a door-way entering the feed-room, which I will have if, after another year's experience, I think it will justify me to continue at it. This makes three dollars and seventy cents per ton, and what is spoilt will bring it up to four dollars—a big per cent. of this loss can be saved by putting it more in a body. By remedying all the mistakes I made this year, I think I can produce it next year for one-half the cost or less.

H. C. JENKINS.

Belle Farm, Harford Co., Md.

P. S. *April* 10.—When I wrote the above statement there was one question I could not answer very satisfactorily, which I consider a very important one. Not wanting to depend too much on my own judgment as to the effect ensilage fed to cows in a slightly acid state has on the quality of butter, I have since then sent some of my butter to parties in your city who are large dealers in choice print butter, and are pronounced the best judges of butter there, and they say the quality of the butter is excellent; and I think where the ensilage is well preserved a superior quality of butter can be made to any that is made from cows fed on all dry food.

There are several little things I may have neglected to mention that I think are very important to be observed in making good ensilage:—One is to have the fodder cut fine, not more than half-inch in length. I have just visited a pit filled with ensilage that was managed the same as mine, except the fodder was cut an inch or more in length, and I find the ensilage not nearly so well preserved. Still the stock eat it quite well. Another thing, it ought not to lie and wilter in the field before putting up. About the half of my fodder was badly bitten with frost before I got it up. I did not feel much alarmed at that, and I find it as well preserved, if not better, than what I put up without being frosted.

Thinking the few facts might be of some interest to those who expect to try ensilaging, I remain, H. C. J.

Large Farms.

Messrs. Editors American Farmer:

The desire to possess and cultivate land is a laudable one, but that desire should not be exorbitant, as is too frequently manifested, and so frequently proves unwise in results when attained. Under certain circumstances, of which the farmer is supposed to be the best judge, it would doubtless be wise to add more territory to a moderate sized farm; but in making an addition the whole subject should be looked at in all its different lights and bearings. To know when and where to stop is of the utmost importance, and what is of still further consequence is to stop at the right time.

All additions will add to the farmers' cares and anxieties; taxes will be increased; expenses for fences and other items will be necessarily enlarged, and with all perhaps the increase in profits will be insufficient to pay for the extra care and anxiety. Too often is it the case that in adding to the area of a farm, from which a comfortable subsistence with a small surplus is derived, the whole becomes a bill of expense which cannot be upheld. It costs too much to keep it in good condition, so that it hangs like a mill stone of care about the neck of the proprietor. His whole family, wife, sons and daughters, are obliged to work hard, and often all overtax themselves to keep the great machine moving; no time is had for the children to obtain a suitable education, even for the limited sphere in which they move, and this constant strain of the mind and muscles unfits them for more intellectual culture, even when they may have a few leisure hours—if any at all are had. What wonder that the children become disgusted and leave the farm as soon as they become allowed or are free to act for themselves. A farm under such circumstances and conditions is a curse to its possessor and his family, and an injury to the whole agricultural community, by bringing discredit upon the profession.

If we wish to raise the business of farming to the position it deserves among the professions, we should attempt and cultivate only what can be thoroughly well done with the means we are enabled to economically employ; improve it to its greatest capacity; interest our children in our business, giving them an opportunity and advantages of obtaining a good and useful education, thus fitting them to honorably and satisfactorily fill their allotted stations in after life. By pursuing this latter course we shall *live* longer, enjoy more of life, lay up, probably, something for a "rainy day," and train up a more intelligent and a happier family, who will ever respect and love our memory.

Worcester Co., Mass. W. H. WHITE.

Our Country's Stay.

"Not having traveled he knoweth nothing,
Knowledge is by experience achieved
And perfected by the swift wing of time."

As a general thing the average farmer is not the one to do much perambulation or to journey to distant parts. The man who is to the manor born and remains in sight of the smoke of his

chimney is one who generally suits himself to the modes and customs of his vicinity. He is apt to think what he does not know is not worth knowing; apt to listen with incredulity about improvements and inventions in his calling. He is like the old lady whose son left her and was gone a great while. He had taken to the water and became a sailor. On his return home after he had done a good deal of voyaging, his mother was rejoiced to see him, and desired him to tell what he had seen. Among the yarns, he had seen some of the wheels that belonged to Pharoah's chariots when he went in pursuit of the Israelites departing from Egypt, &c. He told of flying fish—he had seen them. That was too much for her credulity. She had read about Pharoah and his party having been drowned in the Red Sea, but she had never seen or heard of a flying fish.

The one who rejects everything because it is new and he had never seen it, is as bad as the one who is always changing whether things are good or not. "Prove all things and hold fast to that which is good." The aphorism that he that only knows what occurred before he was born, is always to be a child. There is a just medium; reject the superfluous and retain the useful. Neither be a rolling stone that gathers no moss, nor the setting hen that never gets fat.

I would suggest to my fellow tillers of the soil, be wide-awake, eternal vigilance is the price of success and independence. Keep an eye to improvements and discard old things not advantageous. I heard a distinction drawn between two men, one noted for often changing and the other just the opposite. The preference was given to the man that changed, because he might be right sometimes.

Our President thinks there is something needful and proper to be done for the advancement of agriculture, because it is an important subject in a national as well as an industrial calling. All persons are more or less benefited by it; the proof of it is our daily food. A command was given when Adam and Eve were ejected from the Garden of Eden, "make thy living by the sweat of thy face." The living was to come out of the soil—mother earth. No one should consider himself or herself exempted from performing the allotted share of the command. As all are not engaged in rural pursuits, the advice might be extended to other industrial pursuits. If all exercised their faculties morally, intellectually and corporally, make a long pull, a strong pull, and a pull altogether, their united efforts would advance the general prosperity. There would be little room to complain about hard times.

Do we hear many complaints of failures from the sections where the people are imbued with the spirit of industry? Where there is a friendly rivalry among the people of the various callings to excel in their vocations, you will find peace, plenty and contentment. A good farmer will try to improve his lands and keep them in good life. He will attend to all their capabilities in substance as well as appearances. He will be alive to beauty and good taste. The desert will bloom "with the rose of the Sharon and the lily of the valley." There will be none to make him ashamed or afraid.

If every man will be for his neighbor as for himself, God would be for us all. Whilst we are in the pursuit of our calling we are adding to the country's wealth. Business can be found almost everywhere, and when we are attending to our own we are not apt to be in the others' way. If at a loss what to do, see what is suggested to be done at this season in *The American Farmer*. I hope the well directed labors of the *Farmer* will meet with a merited reward. What is it that keeps the soul and body together? It is the productions of the soil—stop it, and farewell life and prosperity and sublunary greatness.

Jefferson Co., W. Va. PHILO.

Problems in Fertilization.

Messrs. Editors American Farmer:

Your correspondent A. P. S. would appear from his communication in the April number of your journal to be still as far from the discovery of that universal *panacea* for permanent improvement of the soil as he was at the commencement of his experiments fifteen years ago, although he has announced many new and startling changes in the application of known standard fertilizing material, dressed in new garb which for the nonce was effective.

It would seem to the casual reader that your correspondent is not yet prepared to drop the role of the novitiate, and he has evidently not been successful as an agriculturist. Can his routine life as a tiller of the soil be as illogical as his deductions are of what constitutes a true manure?

He has at last returned to and accepted the fundamental principles that have long since been accepted as a truth, and known for thousands of years, that barn-yard manure is *par excellence* the perfect fertilizer. In that we are returning to the soil what we have robbed her of, yet it is difficult to reconcile the fact to his theory, his repugnance to all forms of organic matter, that everything should be purified with fire before nature can again claim it as her own. He must not forget that nature did not put on her brightest garb, and that the beautiful bird carolled his sweet lays while yet the firmanent was draped in sombre tapestry, but slowly after the calm development of this beautiful world has been slow. A lower order of animated nature prepared the way for a higher; beautiful ferns and mosses in their death brought forward something grander. Is it not then reasonable that this very organic matter plays some important part in reproducing? Is not the matter he refers to chiefly organic? Do not water, carbon and nitrogen constitute by far the larger portion of his fertilizer, that he has long since abandoned but now returned to? Facts cannot be reconciled with fancies!

We cannot change those great fundamental laws, yet a wise Providence has given us an intelligent nature to turn to the best ends the means we have surrounding us. We cannot wait for unborn generations to consume and throw off effete matter to fertilize anew, but to turn into account material, and imitate nature as far as possible. That these artificial products

have been the greatest boon bestowed upon the agriculturist must from common acceptation be assumed, from the magnitude of their consumption. The experiences of your correspondent antagonize those of a nation from the minor to the major detail in maturing good crops, and the inference must be drawn, that failure is the result of too much experimenting in opposition to well known laws, and doubtful husbandry is exhausting nature itself.

We cannot speak from any precise data or from direct communication with Mr. Lawes, but we have certainly inferred from his opinions variously expressed, that he would not alone depend upon nitrate of soda as a complete fertilizer for any crop, and certainly cannot depend upon any single application of any fertilizer to be everlastingly a benefit to the soil. If agriculturally correct, it would be mathematically incorrect. By continual subtracting we must obviously eventually arrive at a point were nothing remains. We cannot expect from a single application to see everlasting effects. May not some of the forces applied by your correspondent have been antagonistic, and instead of a crop, inertia?

It seems to us, that the time has not yet arrived where we can either by theory or practice conclude that the application of soluble phosphates are detrimental to the soil, or to the interests of the farmer; for as yet the evidence is that by intelligent application and proper culture they have been the greatest blessing to agriculture. B.

The Cow Pea.

Messrs. Editors American Farmer:

The value of the cow pea for forage and the renovating of worn-out lands is too little appreciated by most farmers. It takes the place of clover in the South, the hot dry summers usually burning the latter out there. It is sown among corn at the last working; having plenty of time to form a heavy mass of foliage before frost; being not only a good fertilizer but affording pasturage for hogs and cattle. I used to wonder why it was given the name of "Cow Pea," until I noticed the greedy relish with which my cattle fed upon them, eating not only the pods but the dry vines in preference to good corn fodder. Last season (about June 20th) I sowed four or five acres broadcast upon the poorest sandy land I had, plowed them in lightly and left them to care for themselves. Before frost they had made such a growth as made it difficult to walk through them; this was upon land where clover would not even take. Contrary to the usual rule, I let them lay upon the land all winter instead of plowing in; experience has taught me that it is best not to plow sandy land in the fall, as it is injured by exposure to the cold and winds of winter and spring. Upon turning my cattle out on the peas soon after frost had killed them all, the flow of milk and yield of butter was doubled. One which I intended to butcher fattened upon them alone. Although they would fill themselves with the peas they did not seem to be injured by them; but I would suggest a little caution about turning them upon them during wet weather.

A neighbor of mine told me that he threw the peas and corn together to his hogs, and they would pick out the peas in preference. There can be no doubt about their value as food for hogs. I expect to sow a field in them this season, in which to turn my hogs next fall to fatten. Some may argue that if allowed to go to seed they will take more from the land than they give back, but I hold that if they are fed upon the land all or nearly all will be returned again; and the vines which the stock trample down afford a good mulch for the land during winter, and is as valuable as that much clover to plow in the following spring. Chemists say that clover and peas contain about the same quantity of fertilizing elements. The cow pea has the advantage of growing anywhere, while clover requires good land. I think it would be a good plan to sow them among many crops that are laid by early; such as corn, peas, potatoes, &c., they are slow in starting and would not injure those crops before they matured, and would cover the ground with their foliage to the exclusion of weeds and grass. Although they will grow upon the poorest land the addition of manure or guano is a great help to a vigorous growth; upon rich land they may be mown for hay as soon as in full blossom, curing as readily as clover hay, and equally as valuable for cattle. The kinds mostly raised at the South are the black corn-field pea, and the whippoorwill; the latter though smaller is the rankest grower and preferred for plowing under green; the seed can be readily obtained of most of the seedmen of Baltimore for from seventy-five cents to one dollar per bushel. One bushel to the acre is sufficient in sowing, which can be done either in drills or broadcast, the first admits of their being cultivated, which is a great advantage, causing a much greater growth of pods and vine. R. S. C.

A. A. County, Md., April 20.

Our French Letter.

The Recent Fat Stock Show.

Messrs. Editors American Farmer:

As a general observation all the native races exhibited prove that marked progress in the sense of fattening has been made; that while precocity is an attribute peculiar to certain breeds, it can be developed in other cases where attention is paid to selection and alimentation; also, animals not intended for the butcher were remarkable for their excellent condition in respect to age. The eminent chemist Cherreuil draws attention to the quality of tallow, &c., of animals fattened to excess, as the diversity in the proportions of the immediate principles of its composition can influence very materially its value. Among the most remarkable exhibits were pigs; the crossings with English races have completely transformed French breeds. Formerly pigs were sent to the fields, to the woods, or left free to roam in the farm-yard, or along the highways, to find their food—the sty being the last of places to count upon a meal.

Dealers drove the animals at sale time from fair to fair. These necessities implied long limbs and flat sides for locomotion; muzzles like plow shares, arched backs, falling ears, and bristles approaching those of the wild boar. To-day pigs go to market by rail, and are fed in comfortable pens; hence no necessity for long legs or lance snouts—special and punctual feeding developes precocity and rapid fattening. In 1880, the mean weight of crossed breeds of the prize pigs was 504 pounds; and in 1881, 496 pounds; their ages were 307 and 350 days, and so represented an average daily increase of 26 and 28 ozs. respectively. On the other hand, in 1880, the mean weight of pure English prize pigs was 507 pounds, and in 1881, 496 pounds; their ages 186 days, thus representing a daily increase in weight of 44 and 43 ounces. It has also been remarked that when a pure race does not receive from time to time infusion of new blood from the parent breed it tends to degenerate.

Producing Meat.

The Agricultural Society instituted some very carefully conducted experiments to test the yield of meat, its nutritive value, &c., proportionate to the weights of the prize animals. These scientific examinations have fully confirmed the points followed in practice for judging and estimating fat stock for slaughtering. Cattle prepared for a show can never be sold for what they cost; they attract public attention by prominently showing the extreme limit that certain aptitudes can attain. To ascertain the commercial value of an animal we must study the cattle market.

The nutritive value of meat, that is of the quantity digested or utilized, is in proportion to the amount of dry matter it contains, and a certain relation between the latter and the azotized and fatty substances. The superior cuts of meat unite these characteristics; they cost dearest at the butchers, and are always found in certain parts of the animal. Hence, of two animals as similar as possible in race and quality of flesh, the superiority will rest with the one that puts up the largest quantity of the choice parts. The Show Committee selected, as standard of comparison, the weight of the hind quarters as compared with the other parts of the carcass, to determine the monetary value of the beast. The eminent chemist Müntz chose a sample of the muscle and fat of each animal for analysis. For the bovines, the sample of meat was taken from the neck, because of all parts of the body that is the most difficult to fatten; hence, differences are more significant in that which refers to fattening propensities and the nutritive value of a food. With all animals the choice cuts of flesh fatten with facility; on the contrary the chemical composition of such parts, in the majority of cases, differ but little whether the animals be fat or lean.

The animals on entering the show are weighed; they remain six days exposed, they are weighed again on entering the slaughter house; the differences between the two weighings range as much as 95 to 165 pounds. Evacuations cannot explain the difference; the heaviest animals represented the greatest loss in weight. If this loss were real it must be at the expense of the fat, eliminated under the form of carbonic acid; but an animal weighing 19 or 20 cwts. does not give off during twenty-four hours a quantity of carbonic acid representing 18 pounds of fat; physiology fixes that figure at 3¼ pounds. The weighing machines then must be faulty. Of two oxen, one weighed 16¾ and the other 17¼ cwts.; both were of the same breed—Short Horn—but the second was six months older. The first yielded 66 per cent. of meat net, the second 71, the tallow being 15 and 15½ per cent. respectively. The second animal was more profitable for the butcher, its choice cuts were greater; but the second ox was smaller and its flesh rather superior. In the case of fat cows, there was a difference of six per cent. of water in their flesh, which means about 7 per cent. of interstitial fat. While the prize oxen above alluded to contained only 39 per cent. of such fat, the cows had 65—the difference not being edible matter. These remarks apply also to sheep with equal force; a Southdown cutlet weighing 18 ounces, but only having a prime portion of flesh of 1¼ ounces, is more nutritive than a Dishley cutlet of 32 ounces with only a portion of 1⅛ ounce of first-class meat.

M. Régnard confirms that the blood of these prize animals is very rich in red globules, thus indicating large quantities of oxygen. But the destruction of the nutritive combustible materials is not in a ratio to the respiratory capacity of the blood. Were it so, the high degree of fattening obtained would be impossible with a blood so rich in oxygen. Calves become equally fat, and yet their blood is very poor in rich globules. But this anomaly does not affect the doctrines of fattening—it strikes only the old doctrine of respiratory combustion.

Trichinosis.

Respecting the outcry against trichinæ, and the embargo placed on American pork by the French Government, M. Bouley, the head Veterinary Inspector, has examined 600 cases of said pork at Havre, and has found them free from all disease. Milne Edwards repeats, that good cooking will destroy the trichinæ, and Boussingault adds, that in order to roast meat uniformly metal skewers ought to be plunged into a joint so as to conduct the heat into the interior.

Management of Lambs.

The lambing season in France is so arranged so as to take place the last fortnight of January and the first fortnight of February. Each one on the point of lambing is placed separately and provided with a good litter; she is aided in case the lamb presents itself irregularly. If the mother refuses to lick the lamb the latter ought to be dredged with salt to induce motherly tenderness. Some lambs are awkward in finding the teat, so they must be assisted, and where the mother refuses to be suckled, place her in a narrow space with the lamb, when she will soon change; if she have no milk, place the lamb with a ewe that has lost her's, or feed it with the bottle on lukewarm milk, or milk slightly heated with water. At the age of three or four months the lambs are weaned, and generally receive a pint of oats daily till five months, then three-quarters till eight months old, rising in proportion. The

ration of meadow hay is about six per cent. of live weight of the animal. The increase in weight of lambs is from 2¼ to 3 ounces per day, pending ten months. Those intended for breeding should have moderate exercise to develop their form and avoid obesity. After the age of a year they must not be over-fed, that would make them sterile and affect even the fineness of the fleece; if extra fine wool be the end in view the young animals ought to be comfortably lodged, the litter kept very clean and the shed warm, the rations good and not excessive.

Poultry Establishments.

An egg farmer has two poultry establishments, in one the fowls are enclosed in a yard and fed on grains, each hen during four years lays one hundred and three eggs annually, and its keep is charged at 5 francs per year. The second establishment allows the fowls to find their own food about the yards and in a large cavalry manure pit; these hens lay one hundred and eleven eggs each per annum; the birds are sold when in their fourth year. To mark their age, when one to three months old one toe on their right foot is cut off, the following year a second, and the next a third, the fourth year tells its own tale. To preserve eggs for ten months and fresh, place them in a bath of whitewash, turning them every second or third day. The poultry shed ought to be swept once every week, fresh straw added, and the walls washed with a solution of one-twentieth of sulphuric acid and water.

The Agricultural Situation

Is satisfactory, the weather has been favorable for field operations, grain fetches a fair price, lean cattle are in demand for fattening, and pigs are very remunerative. In some localities the frost has affected the vines a little, and the phylloxera is not quite so destructive as heretofore; the insect is being clearly checked—preparatory, it is to be hoped, to being exterminated. The prospects of the wool campaign are light. The extent of land under beet will be this year about the same as last, and everywhere the counsel is being given, select suitable seed and success is one-half assured.

Boussingault laid down that the soil is richer in carbonic acid than the atmosphere, being poorer in that acid, however, as it contains more of oxygen. Müntz and Schlosing showed that the production of nitrates in the soil is due to fermentation, that is to the presence of animalcules. Wollny has now demonstrated these also produce carbonic acid. F. C.

Paris, March 24, 1880.

Diarrhœa in Calves.—Give, according to size and age, from two to three ounces of castor oil, with a drachm of laudanum. After four hours, and as long as necessary, give twice or thrice daily, the following mixture in one dose: Two drachms of compound chalk powder with opium, one drachm of powdered gentian root, one ounce of peppermint water, and two ounces of starch emulsion. By way of prevention, the animal should have milk in small quantities at a time, and it is best to give it mixed with an equal quantity of flaxseed tea.

Live Stock.

Jersey Cattle.

Editors American Farmer:

In justification of what I said in my last about the superiority of *home-bred* Jerseys to imported, and of the causes therefor, I would like to quote from an article in the February number of the Monthly Bulletin of the A. J. C. C., from the pen of R. Goodman, Esq. He says: "It is a truism that as a prophet is not without honor save in his own country and in his own home, so the transplanting of an herb or animal from narrow or confined limits to a broader and as genial or not too antagonistic soil is sure to improve the species in succeeding generations. * * * * * * "We cannot find abroad better Jerseys or superior strains of blood than are in the United States, and since the record of the then phenomenal Pansy, H. R. 1019, astonished the best judges of the breed several years ago, and caused them to doubt the accuracy of the statements of her butter production—especially as she was a *home-bred* Jersey—and *imported* Flora, (therefore considered as the A No. 1,) had not made within 60 lbs. as much butter within the same period of time—the yield from animals bred here has exceeded all anticipations of the most sanguine endorsers of Jersey blood. It is, of course, with plenty of money much easier to import or purchase good animals than to breed them—for breeding to improve stock is a business requiring ability, experience, careful observation and study. * * * * * It was many years before our Short Horn men ceased to rely upon importations from Great Britain; but they awoke one morning to find they had the superior animals; and the nobles and long-pursed agriculturists of that home of the beef creatures were in competition with our own lords of many acres."

I had intended in this giving your readers a history of the "Alphea" strain of Jersey cattle, but will defer it to some future time—for the reason that Mr. J. D. Wing has advertised his whole herd of Jerseys for sale at auction in the city of New York early in May, and as he not only owns many of the "Alphea" strain, but owns Polonius, 2513, the only *pure* "Alphea" bull living, except old Mercury, 432—now 12 years old—and I wanted to wait until after that sale, in order that the popularity and value of this strain may be tested. I say value, because a thing is deemed to be worth what it will bring in the open market.

In the meantime let us examine the breeding of the cow which Mr. Goodman says startled the breeding world with her great butter yield, and one of the three cows mentioned in my last as being American celebrities. And they are justly celebrated, not only as great butter makers, but for their power to transmit this quality to their offspring.

Pansy.

Pansy, 1019, or, as she is better known, "Sutliff's Pansy," is the cow that first attracted public attention in this country for great butter yield—for although there had been many great Jersey cows preceding her, they had but a local reputation. She was owned and bred by Mr.

John H. Sutliff, of Bristol, Conn., a mechanic, who owned but the one cow. She was sired by Living Storm, 173, by McClellan, 25, out of Pansy, 8. Her dam was Dolly 2d, 1020, by Emperor 2d, 37, out of Dolly, 1021.

Mr. Sutliff, after using the milk necessary for his family, sold the butter to his neighbors, as he did vegetables from his garden, and made a memorandum of such sales *as they were made* and *at the time* in a small account book. It is from this book that her "record," of which I am about to speak, was compiled long after her death. It is all the more valuable by reason of the fact that at the time the entries were made the cow was not undergoing a "test," and the entries were never intended for publication.

In 1875 a discussion was going on in the columns of the *Country Gentleman* between Mr. Asa Bartholomew and Col. Geo. E. Waring as to the value of "solid colors" in Jerseys, and, in a letter of Feb. 11, 1875, Mr. B. said: "The cow that made the most good butter that ever came under my observation was of a solid color, with full black points, (H. R. 1019.) She made 574 lbs. of butter in one year; 399 lbs. of it in 7 months. Her dam was of solid color, and made from 12 to 13 lbs. of butter per week." To this Col. Waring replied: "Mr. Bartholomew cites the case of a cow which made 574 lbs. of butter in one year. * * * * * * * * I have no question that the statement is made in good faith, *but any man who does not milk his own cow, set the milk with his own hands, and take every precaution to preclude the possibility of accident, or of good natured fraud on the part of his employés, cannot be entirely sure that such a marvelous statement as this is based on a sufficiently careful experiment to warrant its entire reliability.*" Note the severity of the test proposed by Col. Waring. How many owners of Jerseys "milk their own cows and set the milk with their own hands?" Fortunately Pansy's record was capable of undergoing just such a test, and the *Country Gentleman* of March 25, 1875, published the following

Sworn Statement:

"In the years 1871-2 I was the owner of the cow Pansy, 1019—A. J. C. C. H. R.—which I raised from the cow Dolly 2d, 1020—A. J. C. C. H. R.—formerly owned by me. Pansy dropped a calf on the 24th day of September, 1871, being then five years old. For the year ensuing I employed no help at the barn or in the kitchen. I fed and milked the cow myself, and my wife had sole charge of the milk and butter. Without thinking of publication, we decided to keep an account of the product, merely for our own satisfaction. The butter was used in our own family, or sold to our immediate neighbors, and the record is from my accounts with them, which are still preserved. We did not weigh each churning, but as we sold or placed upon our own table, and the footings were made at the end of each month with great care. The trial commenced Oct. 1st, 1871, with the following results: Oct., 60 lbs. 8 ozs.; Nov., 52 lbs.; Dec., 55 lbs. 5 ozs.; Jan., 57 lbs. 4 ozs.; Feb., 54 lbs. 2 ozs.; Mch., 54 lbs. 6 ozs.; April, 47 lbs.; May, 49 lbs. 7 ozs; June, 45 lbs. 9 ozs.; July, 37 lbs. 12 ozs.; Aug., 31 lbs.; and Sept., 30 lbs. Total 574 lbs. 5 ozs. During Nov. considerable milk was sold, so that less butter was made. While I was owner of Dolly 2d, the dam of Pansy, we made no extended trial of her product, but know that she has made 1 lb. 14 ozs. of butter in one day, and within a few ounces of 13 lbs. in one week.

(Signed,) { John H. Sutliff,
{ Harriet J. Sutliff."

Bristol, Conn., Mch. 15.

In a subsequent letter Mr. Sutliff says: "If we had thought of bringing her so prominently before the public we should have been more careful of her product, and believe it would have exceeded 600 lbs. during the year. * * * Her best winter feed was four quarts of meal and good hay."

Mr. G. W. Fairlee, of N. J., in a letter to the *Country Gentleman*, Nov. 8th, 1877—after saying that he, with a view of purchasing her bull calf for $500, determined to investigate this record—says: "Proceeding to Bristol, to prosecute my inquires, I found that Mr. Sutliff was an intelligent mechanic—a worker in metal—with an excellent reputation for integrity and veracity, and ready to submit to my cross-examination, which proved satisfactory. The book in which he kept his record was a small blank book, in which he entered in regular succession, day after day, his purchases of family supplies, and his sales of butter, eggs, cabbages, etc., as the transactions were made. * * * I occupied three hours in examining it, and found that it fully sustained and confirmed the story as told in his and his wife's affidavit."

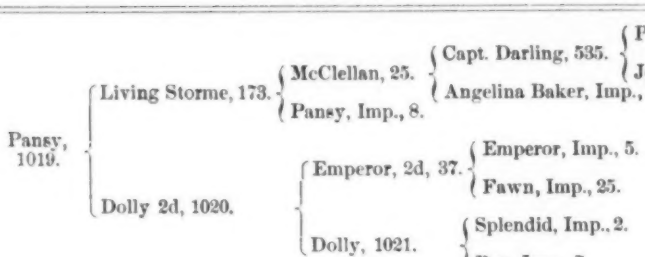
I have taken much of your valuable space to give the details of proof of her record, but in the future your readers must take my word for it, or at least believe that when I give the performance of a cow I have sufficient evidence of its truth to satisfy myself.

What I desire your readers to note particularly is the fact that this record was not made for publication; the cow was not over-fed, and the butter was weighed when sold; and, consequently, after it was thoroughly *worked* and *dry*. Her record has been exceeded by other cows, and even by members of her own family.

The record of Flora Temple has been beaten, but her blood is none the less valued.

I would like, if you can, that you publish the pedigree of Pansy, 1019, as I will be better able to make your readers understand what I am advocating, that, as "like begets like," we should exercise the greatest care in selecting breeding animals, and particularly the male. One male may be the sire of fifty animals in one year, while a cow's offspring is limited to ten or twelve in a life-time. To fix and perpetuate what is good and to eradicate what is bad should be the desire and aim of every breeder, but to accomplish this too much care and study cannot be employed.

The animals in this pedigree whose blood appears in the noted cows of the country, are McClellan, 25, Pansy, 8, Emperor, 5, and Splendid, 2. For instance, Jersey cow, Pansy Sutliff, 6002, that made 300 lbs. butter in 300 days as a two years old; 450 lbs. in 300 days as a three years old, and recently sold for $1000, (she was dropped in 1876,) was produced by the same combination of McClellan, 25, and Pansy, 8, on one



Pedigree of Pansy.

side, and Emperor, 5, and Splendid, 2, on the other, but with this combination repeated. Among the great cows descended from Pansy, 8, are Pansy 6th, 38, whose photograph is in Vol. I of Herd Register. She was a 20-quart cow, making an estimated yield of 16 lbs. per week, and very persistent; Lady Mel 2d, 1795, that made 183 lbs. in 61 days, or 21 lbs. per week—3 lbs. per day; Filbert, 3630, that in 8 mos. gave eight times her weight (1055 lbs.) in milk; May Blossom, 5657, that made 18 lbs. 9 ozs. in nine days, as a a two year old; Value 2d, 6844, owned by Thos. Taggart, Esq., of Hagerstown, Md., now five years old, whose record has never been published to our knowledge, but we believe it to be as much as 3 lbs. per day; and the cow Pansy, 1019, now under discussion, besides many others that could be named.

McClellan, 25, appears three times in the pedigree of Lady Mel 2d, 1795, and in Filbert, 3630; in Pansy Sutliff, 6002, twice; in May Blossom, 5657, and in Value 2d, three times.

Emperor, 5, appears in Pansy, 1019, and Pansy Sutliff, 6002.

Splendid appears in such cows as Bradley Cow, 2052, (18 lbs. in seven days;) Couch's Lily, 3237, (71 lbs. in thirty days;) Rose, 394, (1 lb. from less than 4 quarts of milk when two years old,) and that gave 44 lbs. of milk, 5½ gals.,) at three years old—see *Country Gentleman* of June 17, 1880. Value 2d; Arawana Buttercup, 6052, five times, and, in fact, in most of the best Jerseys bred in this country show one or more traces to this grand old bull.

In January last, while in the North, the writer was shown two heifers, less than two years old, that were held by their owner at $500 and $600 respectively. A Vermont gentleman had the refusal at these prices, and although he had never seen them he took the $600 heifer, because her pedigree showed one more trace to Splendid, 2, than the other.

Old Pansy, 1019, died January—from milk fever. She left one son—Champion of America, 1567—now 8 years old, and owned by Mr. Wm. B. Montgomery of Starkville, Miss. To show the value of this blood I would like to mention the performance of a few of Champion's daughters:

American Girl, 5686, formerly owned by John I. Holly, Esq., gave 14 qts. with her first calf, and has taken first prize at all the fairs where exhibited since a calf, and she has been exhibited at all of the best shows. Mr. Holly sold Filbert, 3630; American Girl, 5686, and Josephine 2d, 3296, to H. S. Russell, of Hyde Park, Mass., for $3,150.

Princess Sheila, ——, gave as high as 39 lbs. of milk per day, and made 14 lbs. 7 ozs. of butter in 7 days when 2 years old. She is now owned by Charles Sharpless, Esq., of Philadelphia. Mr. Daniel, her former owner, says; "I supposed I had placed the price high enough to drive his (Mr. Sharpless) agent away, but he handed me the funds without any hesitating."

Jesse Levenworth, 8248, when giving 10 qts. of milk, made 1 lb. 15 ozs. per day; Spar, 9152, 2 years old, 12 lbs. 4 ozs. in 7 days; Daisy, over 1½ lbs. per day; Rosa, 13 lbs. 20 ozs. in 7 days—3 years old. And many others could be named equally as good.

There is nothing more entertaining, as well as instructive to a real admirer of the breed, than to take the volumes of the Herd Register, and with pencil and paper construct the geneological tree of the noted butter makers. He will be surprised to find the names of the same set of ancestors appear in so many genealogies, and in this is it instructive. As these combinations have resulted in good one or more times, the chances of their doing so again are great.

As to the representatives of old Pansy, 1019, in Maryland, the writer knows of no direct lineal descendant except the heifer calf of Mr. T. A. Seth, "American Lady," spoken of in your last, a great-granddaughter, and Mr. Phillips' heifer Lilly Morse, a great-great-granddaughter.—"American Lady" has in her veins the combination of blood of which we have spoken, viz:—McClellan, Pansy, Splendid and Emperor—*four times*, besides other blood almost equally as noted. Mr. Phillips' heifer Robema Rex, spoken of last month, is a collateral descendant, being out of the sister of Pansy, 1019, and through Jack Dacher, 932, the sire of Robema, 3840, traces to McClellan and Pansy, 8. His heifer Lily's Pansy, 11,355, is similarly bred—by Walnut Prince, out of Robema, by Beeswax, who traces to Living Storme, McClellan and Pansy, 8. But among the cattle descended from the Jerseys first owned in Maryland are some descended from Pansy, 8, imported by J. T. Norton. Among them old Sweetbrier, 603, formerly owned, as we think, by Mr. Glenn, of Baltimore county; but it would be impossible to give them all, as few, if any, of the Maryland breeders take the care to issue catalogues of pedigrees. x.

Sheep for Mutton and Wool.

Editors American Farmer:

I was requested by a friend, who thinks I have somewhat of a sheepish reputation or experience, to answer an inquiry in the *Sun*, "where can I find the best lands for sheep raising in Virginia?" This is difficult, and the editor properly suggested, "is it to raise for wool or mutton?" In this region I have successfully raised the mutton sheep. Cotswolds such as I imported were too costly for the shambles and for mutton, and I bred them to high grade Leicesters, another mutton sheep, and this produce I sold to the butcher the fall after one year old for $10 each, and found he sold their *saddles* for $35 each. The next year I sold to a New York butcher, who came on for them, for $35 each. Some of my sheep were brought up to 235, 208 and 198 lbs., neat; the last two were twins. I have had a yearling buck to weigh 435 lbs. I neglected to mention that I had bargained with the butcher for $100 for each mutton I brought to him weighing 200 lbs. net. The war broke out and the Union troops destroyed the flock. These weights are unusual. They are too heavy to travel much, and therefore require good grass to fill them soon.

This is a good grass country, much like the blue grass region in Kentucky, but harder worked; we never sow that seed, and the farmers do not leave a fair proportion of their land in sod, yet build a fence on the road and the grass will be there in a few years, and it is growing thro' the pike where not so much used. This could be a fine grazing country.

The Southdown is a better mutton at 4 years old than the Cotswold, which at that age would be near all tallow, but I put my Cotswolds into market yearlings at much higher prices than the Southdowns at any age. I gave Clarke county a high reputation for muttons. I have shown what I have done with large mutton sheep, besides raising blooded horses, cattle, hogs, the usual grains, and more money to the fleeces. To do this requires good land, and that brings good prices; but if wool is the object, I should think mountain land, that is very cheap, where you may crowd them on it to roam over it, and if deficient in grass to browse on the shrubbery; if they get poor it will not matter, as I hear the poorer the sheep the finer the wool. I have had no experience with them; they might give more profit to the outlay than for such sheep on costly land. I should consider a Cotswold 4 years old, who is all tallow, not suitable for the table, but valuable for greasing poor muttons.

The truth is, real, good mutton is rarely, if ever seen in either city or town; the reason, graze a mutton on garlic until his flesh is saturated with it, shut him up one night without food, and when slaughtered in the morning the flavor will be gone; but put one thro' new scenes, causing alarm and fever, and the sweet juices of the grass are gone, and the mutton comparatively insipid. The remedy is the course of the English carcass butchers, who go to the country, slaughter their muttons on the grass, and bring their carcasses in. Such mutton sells higher.

Clarke Co., Va. J. W. WARE.

Jersey Red Swine.

Messrs. Editors American Farmer:

I am constantly receiving letters of inquiry regarding this breed of swine, and for the benefit of your subscribers I will give a description and history of them.

They were imported into Salem Co., N. J., at least forty years ago, where they soon became the leading breed. Their wonderful vigor and vitality enables them to readily assimilate food of all descriptions, and this coupled with a remarkable ability to lay on flesh soon attracted the attention of a few enterprising feeders, who, by a judicious selection and crossing of the best specimens of the breed, attained results which gave them a local popularity, and although its place as the leading breed these has been frequently contested by other breeds. The Reds not only distanced all competitors but have recently challenged the most popular breeds in their own strongholds, with the most flattering results, and bid fair soon to occupy the very foremost rank among the best established breeds. The characteristics of the breed are a good coat of fine red hair, broad faces, short snouts, thin pendant or wilted ears, good shoulders, largely developed hams, broad straight backs, excellent middle pieces, the whole supported by the fine symmetrical legs, with which they arise and travel with apparent ease. They are apparently mange proof, and fatten readily at any age from pighood up, until exceedingly heavy weights are attained.

The above qualities, combined with remarkable strong hearty constitutions, make them a very desirable breed of swine. I deem their remarkable vigor one of their best traits, making it especially valuable as a cross upon the various other breeds. When asked, "would you advise me to try them," I will reply that it depends upon circumstances altogether; for your own family use the Berkshires are very popular; for market the West has found the Poland China suit their purpose, and many have been satisfied with Chesters. Where heavy weights are desired, all breeds have their advocates as well as some good traits.

I have found the Reds all their New Jersey friends claim for them, with the exception of very heavy weights, but I am contented with less than some men claim, provided it be profitable. I have never raised a hog that would dress 1,000 lbs., or had a cow make 21 lbs. of butter in seven days, a hen lay 230 eggs per annum. My stock adhere to the rule, not the exception, though I have had some good ones.

WM. E. MANAKER.

Montgomery Co., Md., April 13, 1881.

Jerseys in Baltimore County.

Messrs. Editors American Farmer:

I was much interested in the articles of your correspondent in the April issue, and agree with him as to the value of the Alphea strain of Jerseys. But from what he says of the purchase of Mr. Von Kapff, your readers will no doubt think that there is no other Alphea blood in Baltimore

county. It is with the desire to correct this impression that I ask the insertion of this:

My neighbor, Mr. Charles E. Hand, than whom there is no more enthusiastic admirer or better posted breeder of Jerseys, has at the head of his herd the Alphea Bull Mercurio, 4783. This young bull on the part of his sire is a great-grandson of Mercury, 432—the son of Alphea, 171—and on the part of his dam is a grandson of Mercury, and traces besides to Vesta, Dolphin 2d, and Sylphide—these being three of the celebrated herd imported by Col. R. M. Hoe.

I have recently sold to Mr. John I. Holly, of Plainsfield, N. J., Dessie Labyrinth. 3988, bred by Messrs. Clark & Jones, of Baltimore county, a granddaughter of Mercury and tracing to Edith, 167. I retained a handsome heifer calf, by Prospect, 2047. I have recently bought a heifer in calf to Mr. Holly's bull Uproar, 4609—a grandson of the great Eurotas, 2454, and tracing through another channel to Eurotas' sire, Riot, 2d, 469. Uproar traces to Saturn, 94, and Rhea, 166, (the sire and dam of Alphea,) eight times. He is held by his owner at $2,000.

Windsor, April 14, '81. T. ALEX. SETH.

The Next Fat Cattle Show at Chicago.

The premiums in the aggregate offered in the several classes are as follows:

	1881.	1880.
Cattle	$2,775	$2,125
Sheep	920	680
Swine	790	550
Poultry	190	100
Total	$4,675	$3,455

A number of prominent business men of Chicago have agreed to subscribe liberally to the premium fund, and these amounts will be added to the above.

One of the leading Chicago wholesale dry goods houses will give $700 in special premiums.

And whilst upon the subject of Fat Cattle, we would refer the reader to our French letter in this number for some important investigations upon the fattening of bullocks.

The English *Agricultural Gazette* reports an increase of 3 lbs. per head per diem, for a length of time running over six weeks, as the average in fattening bullocks, and that 18 lbs. per week is not uncommon. It adds, that by feeding 2 lbs. linseed meal, 5 lbs. cotton seed meal, and 3 lbs. mixed meal—does not say what sort of grain is ground for this last—making 10 lbs. in all, well-bred bullocks, weighing 880 lbs. each, might increase 15 lbs. per head per week. The *Gazette* does not say whether they are fed on hay or straw during this time—although they doubtless were—or how much they got of either. It thinks that, by substituting 5 lbs. of linseed meal for the 5 lbs. of cotton seed meal above, and doubling the mixed meal, making 13 lbs. in all, a bullock would gain 3 lbs. per day. This strikes us as a small allowance of feed for so great a gain, and we should like to hear from our own cattle feeders what they have to say on the subject.

In Northumberland, when bullocks are fed turnips and straw, with 3 lbs. of linseed meal and 3 lbs of mixed meal per day, 14 lbs. per week is considered a fair gain. We wish the weight of the turnips and straw were given, for without these no definite result is obtained. We should like to ask, also, whether the straw was oat, wheat, or rye. We presume oat, as that is the most nutricious of the three, and is more generally fed than the other two.

Sheep, the *Gazette* says, gain 3 lbs. per week on good feed; and as six of these are equivalent to one bullock as food consumers, we might look, from this, to find bullocks gaining their 18 lbs. per week.

The Season and Sheep.

Messrs. Editors American Farmer:

We have had a severe winter—beginning in November, and continuing now in April. A heavy snow fell, lying long on the ground. This protected the wheat during that long spell of hard weather, and I doubt its injuring the wheat; but since the snow left we have had hard freezing and thawing weather which is hardest on wheat. Doubtless it has suffered and is still suffering from it and will suffer more if this weather continues, so that we cannot expect as good crop this year as last. Fruit growers think their fruit lost; not a furrow has been turned here yet, though heretofore we have plowed in February.

The great loss here has been sheep. When snow was on the ground the constipation of the bowels cause disease which we all know by different names; all know it is difficult to cure, but few seek to provide a preventive. In England we hear nothing of it, for they feed them turnips. If the farmer would raise turnips for his sheep in winter in snow, the probability is he would save many. In case of failure, all roots and also cabbage, would greatly aid. Failing in these, mix a little epsom salts (dry) with fine salt to give them; it will act better on sheep and cattle *dry* than in a *liquid* state, and keep their bowels in a more wholesome state.

J. W. WARE.

Clarke Co., Va., April 5, 1881.

Short Horn Cattle.

The public sales of this season, just commenced at the west gives evidence that the business of breeding cattle of the improved strains is on the increase with all other branches of trade. The prices brought, and the number of sales announced, shows great activity. The last number of the *National Live Stock Journal* remarks that never was there anything like the demand for Short-horns of both sexes that exists at the present day; but more especially for bulls for crossing on native cows, to grade up their offspring for a superior class of bullocks. This greatly increased demand is not only found in America, but also in England, their native home, the British Colonies, and throughout the continent.

The breeding and rearing of improved cattle, as well as that of all other kinds of domestic stock, at present moderate prices, we have no doubt is the most profitable part of farming, and surely nothing is so pleasant and interesting.

Animals are society to the husbandman, and surrounded by them he never feels lonely, however isolated his situation may be. Then this important advantage follows in breeding and rearing them, they keep up the fertility of the soil; whereas the growing of grain, vegetables and hay; carried off to a market, so rapidly exhausts it that in many instances the value of the cattle in a few years becomes greatly lessened.

At the sale on April 13th of Short Horn Cattle from the Bow Park Herd of Canada, held at Waukegan, Ills., some good prices were realized, the average on females being about $664, and on bulls $379. Kirklevington Duchess 26th brought $2,550; Duchess of Oxford 21st, $4,200, and Duchess of Barrington 10th, $1,810. The Duke of Oxford 46th brought $2,350, and the 8th Duke of Kinklevington $1,760. There were 57 head sold in all, and the aggregate amount reached $28,735.

Veterinary Remedies.

The following, taken from the *National Live Stock Journal*, are timely recipes:

LICE.—As a simple and effective remedy against lice on stock, we have frequently recommended to give the animals a good dusting over once or twice a week with wood ashes. On the following day, give the animals a thorough grooming and brushing, and burn all the hairs and dirt thus removed. Attend to general cleanliness of the stable as well as of the animals, and give the woodwork a coat of whitewash occasionally.

WORMS—Mix a drachm of powdered Sulphate of iron among the food every evening, during every other week. Keep constantly some salt placed in a corner within convenient reach of the horse. If the worms are the small so-called pin-worms, give an injection *per rectum*, daily, of a quart of warm water in which is mixed a drachm of carbolic acid. The injection should be given just after the bowels have moved, or when the horse returns from work.

REMOVAL OF THE AFTER-BIRTH—When due care is exercised, the after-birth may be removed without danger on the second or third day after calving, by inserting the oiled hand and arm, and separating the attachments with the fingers. No strong traction or pulling of the after-birth should be allowed. The animal should be fed on sloppy or steamed food during a week succeeding calving.

COLIC—With a view of removing the cause give first a dose of physic, composed of an ounce each of aloes and carbonate of soda, dissolved in a pint of hot water, and add to this solution an ounce of tincture of ginger. Apply brisk friction to the flanks and the abdomen by means of straw wisps, and repeat this at short intervals. Lead the horse beside another in a gentle trot, ten minutes at a time, every half hour, but not in a gallop. If no other stimulant is at hand, give every half-hour, three ounces of whiskey in a pint of water; otherwise give half an ounce each of fluid extract of belladonna and aromatic spirits of ammonia and an ounce of laudanum, in a pint of cold water. Give as often blood-warm injections of soap-suds, one to two quarts at a time, *per rectum*. In case there should be much flatulency or bloating, give besides the above mentioned laxative, a dose composed of three drachms of aqua ammonia in a pint of cold water, every half hour, besides abdominal friction injections, and walking exercise. When the symptoms lessen in severity give every hour until all symptoms have disappeared, a dose of half an ounce each of sweet spirits of nitre, tincture of gentian, and tincture of ginger in a pint of water. After an attack of colic the horse should not be used for work that day or the following twenty-four hours, and he should be fed lightly on easily-digested food. Feeding the horse continually a whole winter on dry food, as you do, is wrong. On such feeding, a horse should have a bran mash at least twice a week, and salt should be constantly placed within easy reach.

GREASE HEELS—Attend to cleanliness. Apply during two days poultices of equal parts of bran, flaxseed meal and powdered charcoal. Thereafter apply twice or thrice daily a portion of oxide of zinc ointment, previously removing all secretions of matter, as well as dry scabs and crusts. If, after a week or ten days, the case does not improve satisfactorily, apply instead of the ointment twice or thrice daily a portion of a mixture of one ounce of Goulard's extract and half an ounce of carbolic acid to half a pint of water. Give loosening food, among which may be mixed two drachms of nitrate of potash, morning and evening, during one week.

The Dairy.

Ensilage and Butter.

Messrs. Editors American Farmer:

I sent you a report of my experiment with ensilage, published in your March number. I increased the quantity in feeding, and, as expected, it lasted the two months, having given out on April 6th inst. I hoped that the spring grasses would have made a good start 'ere this, but vegetation is unusually backward.

Having to return to dry food for the cows, there is a perceptible falling off in quantity of milk, and a marked difference in the quantity and color of the cream.

I made a shipment of butter to Baltimore a few days since, which we cannot excel in June for color and flavor.

I report this item for the reason of doubts expressed in your last number as to the value of ensilage. For milk and butter I look upon it as valuable; as food for fattening cattle I have no experience, but do not think I would use it. Have been of that opinion, and have frequently expressed it, ever since using it.

Will prepare for a largely increased supply for coming winter, which shows I think well of it.

I forgot to say when I sent you the paper on ensilage that the time occupied in cutting it with hand-power cutter was, by the watch, 17 hours; so that two months food for ten cows was cut up in 17 hours by hand. I timed cutting of every load. The rest of time was hauling, tramping, etc.

Halifax Co., Va., April 9, 1881. S.

The Dairy Cow.

At the late convention of dairymen held at Toronto, Canada, a number of the most eminent men of the Northern and Eastern States, as well as those of Canada, were present and took part in the discussions. The sittings of the convention lasted several days, and the information imparted was varied and practical. The Hon. Harris Lewis, of New York, was called on and delivered a lecture on "The Cow," full of useful instruction as to the breeding and management of that useful animal. The lecture was received with great satisfaction, and we here transfer to our pages an abstract thereof:

Mr. Lewis said that according to the best information we have a vast number of valuable cows, yet in that vast number there are many that are not adapted for farm and dairy purposes. He attached a great deal of importance to the selection of breeds. There are breeds specially adapted for butter-making, such as the Durham and Jersey. For cheese he favored the Ayrshire and Holstein, as in the milk of these breeds there are many more fat globules, and it being difficult for the milk to rise through them, it is well adapted for cheese. For milk for table and family use he advocated the claims of the Channel Island cow. He advised the mixing of the different breeds, and getting new blood. On rough, hilly farms small breeds, such as the Channel Island and Jersey, are preferable to a heavy class of cattle, and on smooth, productive farms select larger breeds, such as the North Devon, Ayrshire and Holstein. If a good butter cow is desired, select the Channel Island. She is always found to be the best general cow. As to breeding, he was of the opinion that it was a great mistake to overfeed or stuff cows with all kinds of food. He thought that feeding twice per day with good hay at a regular stated time, with one peck of roots, was amply sufficient, and he knew from his own experience that by following this method of feeding he could get more butter and cheese, and of a finer flavor, than he could if he overfed them. The cow, he said, never masticates her food at the time she eats, but after she lies down. But if she gets frequent feeding this mastication is delayed. She should have plenty of time to masticate what she has already eaten. If the cow is dry, or nearly so, she should have pure fresh water once per day, and in watering cows he was strongly opposed to allowing them to drink from a creek or pool of water through a hole cut in the ice. They should be allowed to drink in as easy a position as possible. A very important fact, which he thought should be remembered by those engaged in good stock-raising, is that plenty of salt should be placed where the cows can readily get it when they want it. Cows who have all the salt they want will give much more milk. The cow should always be milked at a regular and stated time, and in her turn, and always by the same milker. He thought it very hurtful to change milkers, as the cow becomes attached to the person who milks her regularly, and a larger quantity of milk can be obtained from her if she has the same milker. As to stabling, he said cows rest easier and better in a temperature of 45 degrees, and stables should be kept at that temperature, and should have plenty of light, for the cows prefer light. He thought as much care should be taken to make the stalls as comfortable for the cow as is taken in our dwelling houses. When the cow is shedding her hair she should be carded, as nothing is more acceptable to the cow. Above all, keep her clean and respectable; put the manure on the land, and not on the cow. As soon as grass begins to grow the gate should be opened and the cow allowed to get to pasture. He was greatly in favor of having cows begin on the pasture with the first growth of the grass, but they should be fed at the barn with hay each day until the grass gets all its summer substance. He advised that to make good pastures they should be seeded down with two bushels of orchard grass and half a bushel of Kentucky blue grass. These grasses are all deep-rooted grasses, and stand better than timothy and clover. He did not believe in the old-time method of sowing timothy and clover one year and the next clover and timothy. (Laughter.) In seeding for meadows other grasses may be adopted. He said he was a strong advocate of one pasture and no change. He believed just as firmly that a change was as demoralizing to the cow as free love was demoralizing to men and women. A cow is always against being moved from place to place. In the treatment of the cow he said he would like to see the man who was ever kicked by the cow who could sit down without kicking her, saying loud words, or beating her in some way. If such a man was present he would like to have him rise up. He would guarantee not one could be found. But the law of kindness is the best way. Kindness begets kindness, and in the intercourse with the cow as much kindness should be shown as in human affairs. If he had occasion to visit a man, the moment he saw his cow and stable he could tell the kind of a man he had to deal with, whether a kind, humane person, or one more of the brute kind. The cow knows when she is kindly treated, and remembers it just as well as we do. You can never overcome brute force by brute force. Always bear in mind that the cow has been the constant companion of man since the time of Adam and Eve. She has shared her life with us, and therefore should be kindly treated and well cared for, and never beaten or abused.

Regularity in Butter Making.

Nature is uniform in her processes—like causes produce like effects. The dairyman is anxious to receive the highest price for his butter, but is often careless about having the quality of his butter correspond with the price he covets. The expert educated to run machinery, is expected to perform his work in the same manner every day. The law governing steam is uniform. The law governing the rising of cream, and the separation of the butter from it, is also uniform, and must be observed every day. When the dairyman understands the best process for butter making, and follows this with uniformity, his butter will be uniform, and he may command his market. This uniformity in butter making needs to be carried out in all the particulars.

1. The cows should be fed only with wholesome food and pure water. They should never be permitted to drink impure water, or water into which animal matter has been deposited. The germs in this tainted water have been detected in the milk of cows drinking it. Some dairymen have been found so careless as to place dead animals in such position that the animal matter is washed into the stream or reservoir, where the cows drink. This is a frequent source of taint in milk, and injury to butter.

2. After good food and pure water is provided, cleanliness should be observed in milking and handling the milk. The milk must be set in a pure atmosphere, the milk-room kept well ventilated.

3. The temperature in which the milk is set, should be kept as uniform as possible. The nearer this temperature is kept to sixty degrees, the better, if the milk is set shallow, or two to three inches deep; a lower temperature being allowable if the milk is set deep, or ten to sixteen inches.

4. The skimming should be done as soon as the milk becomes distinctly sour; and if the temperature is too low to allow the milk to become sour at thirty-six to forty-eight hours, it should be skimmed sweet to prevent the cream from becoming bitter—this latter condition renders the best butter impossible. It is better that the milk should be skimmed sweet than to allow the flavor of the cream to be injured. Sweet cream may be ripened after skimming.

5. The handling of the cream is a most important part of the process of butter making. More butter is injured in the irregular handling of the cream, than in irregular setting of the milk. If the skimming is done at the right time, and the cream kept at an even temperature, until it becomes distinctly sour, and of a uniform quality, having been stirred several times, the butter is likely to be of good quality.

To secure this even temperature for the cream whilst ripening, some dairymen have sunk large and deep wells in the dairy room. The temperature of these wells is more uniform than any room can be kept with ice. The temperature of most well water is about fifty-five degrees, and this does not change with the temperature of the external air.

A well six feet in diameter will furnish a good storage for butter and ripening cream. There will usually be six to ten or more feet above the water in the well, and this furnishes plenty of room to hang cream pails and butter pails. Let the well have a tight plank cover, with two lids (one each side of the centre) sixteen inches wide; place hooks on the underside of the plank cover, upon which to hang the cream pails and butter pails. When the cream is skimmed, place it in a cream pail wiih a tight cover, and hang this under the platform of the well. When the pail is filled or a churning is obtained, let the cream be very thoroughly stirred together and left, say twelve hours, till it becomes uniform in texture and conditions, when it should be immediately churned. Let the butter-milk be drawn, if possible, when the butter is in the granular state. Now place it upon the butter-worker, and add (for most customers) one ounce of salt to the pound of butter. Work this in slightly, but evenly; then place it in a pail with a muslin cloth over it, and a little moist salt on top; place the pail in the well for twenty-four hours, then rework it, just enough to work out the butter-milk, and pack permanently in crock, pail, or tub in which it is to be sent to market. Place the pail under the cover of the well. This will keep it at an even temperature till sent to market. Butter should usually be marketed within a few weeks of its manufacture. Do these things up in this uniform way, and the product will always be uniform, and the price satisfactory.—*Nat. Live Stock Journal.*

Wonderful Record of a Holstein Cow.

The Feed used in producing it.

The Holstein cow "Aaggie," belonging to Messrs. SMITHS & POWELL, of Syracuse, N. Y., on the 28th of March, closed her 6 year-old milk record. It surpasses any record heretofore known by over 1800 lbs. The following is a detailed statement concerning it:

This record was kept by carefully weighing each milking. The record began March 28th. Highest daily yield, 84¼ lbs; yield for highest continued month, 2,364⅛ lbs., and for one year as follows:

	Lbs.	*Oz.*
March (four days)	177	3
April	2,200	0
May	2,362	2
June	2,961	1
July	1,647	14
August	1,332	1
September	1,129	4
October	1,427	15
November	1,381	5
December	1,335	15
January	1,174	12
February	1,053	12
March	762	11
Total	18,004	15

Aaggie was calved April 1, 1874, in North Holland, and imported by her present owners in September, 1879. She was then in milk, and continued to milk largely until the January following, when she was forced dry. She was fed on corn fodder, with very little hay, beets, and a small allowance of grain daily, until she dropped her calf, March 23d. Her record began March 28th. Her grain feed, while making her record, was composed of equal parts, by weight, of wheat bran and ground oats, with sufficient quantity of corn meal and oil meal to make 1 pint of the former and ½ pint of the latter daily. Of this mixture she was fed as follows: From date of commencing record until June 1st, 4 lbs. three times a day; to July 24th, 3½ lbs.; to December 25th, 3 1-6 lbs., and since that date a little less than 3 lbs.

Until May 10th she had clover hay, second cutting, and about 6 quarts of cut roots per day, beets and carrots—mostly the former; then, until May 16th, millet and coarse hay. Being short of pasture, soiling was resorted to, green rye, clover, oats and fodder corn being each fed in its season. When winter set in she was fed mostly corn fodder whole, and her feed of 4 to 8 quarts of roots, mostly beets, resumed, the amount depending upon the condition of the bowels.

Through January and February she was fed stalks and hay, each twice per day; since then mostly hay; roots continued.

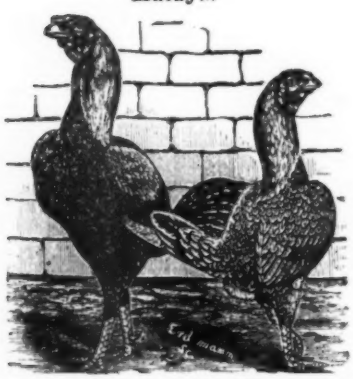
In the same herd, Aegis has recently closed her 6 year-old record at 16,823 lbs. 10 ozs., and Lady of the Lake her 2 year-old record (commencing at 22 months of age) of 12,200 lbs. 4 oz. This last heifer was from the same stable in Holland as the wonderful heifer Netherland Queen, that made a 2 year-old record a year ago of 13,574 lbs. 3 oz.

MR. FRED. VONKAPFF has purchased from Mr. John E. Phillips, the Jersey heifer, Princess Gentian, 9114, referred to in our April number, and from William Crozier of New York, a heifer calf, sire Imported Rival, dam Maybell's Jewel, 6251, by Rex, 1330.

The Poultry Yard.

By G. O. Brown, Montvue Poultry Yards, Frooklandville, Md.

Malays.



The Malay fowls were originally brought from the Peninsula of that name in Asia. They are decidedly courageous, lofty in carriage, usually very healthy and prolific, good layers, and as is characteristic with all species of games, good table fowls.

The Malay has been during the past few years used extensively for crossing on the other breeds of game fowls, which has been the means of greatly adding both size and strength to the cross. The Malay is a very powerful built bird, and is by no means as clumsy as he looks. Their weight at maturity, averages from 8 to 9 pounds for males, and 5 to 6 for the females. The above cut was drawn from life of birds owned by Mr John E. Diehl, of Beverly, N. J., and he describes the pair as: "of the black—red type, with a firm, close and glossy plumage—the cocks being dark red, with solid black breast and tail, and bright yellow, well scaled legs, entirely free from feathering. The hens are of a cinnamon or dark brown partridged-marked color, with dark, purpleish brown hackles and tails. Mr. Diehl has devoted considerable attention to the Malays, and wins all the premiums wherever he exhibits. G. O. B.

Mating Fowls.

Messrs. Editors American Farmer:

From the number of communications lately received, there appears to be an increasing desire to improve the stock of poultry on hand. All intending to start yards of thorough-bred fowls, should not let the extra cost of fine specimens cause them to take inferior specimens as a gift, if they intend to breed for anything like standard birds. These fine specimens are sometimes accidental, even with poor stock, but if from a well-bred strain they are valuable, for the superiority is an inherent quality of such strain and will give a reasonably sure guarantee of a continuance of the same.

But as most farmers only wish to improve the stock already on hand, the cheaper specimens of the same blood though not so high in standard points would prove valuable. The great mistake made in ordering large breeds is that the heaviest male bird is wanted to mate with 3 and 4 pound hens which in nine cases in ten, will in time prove unsatisfactory. Parties who order birds should state to the breeder what they want to do and leave him to select the specimen. Knowing the very large ones would not prove the thing wanted, he would send a smaller, more compact and active bird that would give ultimate satisfaction. The young stock of pullets mated to him the next season would give a fine lot of ¾ bloods, then the third year getting one nearer the standard in weight and style, they could not fail to please. I have bred 12½ and 13 pounds at 9 months old, but never had but one (a Light Brahma) that proved valuable as a breeder.

Adult Asiatics should not have all they will eat; do not expect to keep them in show condition during the breeding season; high feeding will improve their looks but impair their utility.

From nine years' experince with them I find the Light Brahmas No. 1 farmers' fowls--(*1farm.*) They are large, superior winter layers, strong healthy growers, and withal are handsome.

I have found hot fires kindled in the fowl house, on the coals of which a table-spoonful of carbolic acid mixed with half a pound of sulphur, to be the best remedy for the different poultry diseases. C. B. W.

Jarboesville, Md.

Water for Chicks.

Messrs. Editors American Farmer:

I cannot refrain from entering my protest against the advice of your Poultry Department Editor, in relation to withholding of liquid from young chicks, and consider the whole thing as a case of drawing a conclusion from wrong premises. The idea seems to have originated in England, under a totally different climate and other conditions. There the theory is that *no fowls* need water, just as you have seen, Mr. Editor, it argued learnedly that cattle need no salt, that side being taken by those dwelling near the influence of the sea air and probably feeding to some extent on salt marsh hay. In twenty years' experience in raising chickens, it has invariably been my custom to allow the chicks

water *as soon as they will drink it*, and milk whenever it could be spared. I had a brood to come out a few days since, (the first day they need neither food or water, but are tested when they show a disposition for food,) gave them no water and watched their behavior, but filled a quart fruit tin with water for the hen; on the second day the little ones were found reaching up after the water in the tin, and were forthwith supplied with the *needful*, and at nine days old I saw them drink from a quart tin, and at two weeks able to flutter up to any height at which a water vessel might be affixed to coop for the hen to drink from. I will say, further, that my losses from diarrhœa have been unnoticeable. I do not *know* of *any*, certainly not whole *broods*, *&c.* The cause of loss may be feeding wet food, raw meal mixed with cold water, (though that is doubtful,) *impure* water, *musty* meal, &c. Have the advocates of no water kept their chicks in such a way that they could get *no* access to rain water, dew, or *from the drops from the hen's beak*, who surely has a supply granted her? I venture to say that the chicks can be noticed trying to get their craving satisfied that way, just as they can be seen pecking the food from her and each other's bills. While the feeding as advised by Mr. Brown is all that could be desired, I do not think his view as to liquid is at all *proved* by a few *uncertain* experiments. Next we will be told that fowls need no salt, that it kills them, &c., when my practice is to put a handful daily to four quarts of soft food. Give us *proved facts*, not probabilities that admit of more than one explanation. T. W. HOOPER.

NOTE.—The above criticism by Mr. Hooper we are glad to receive. Discussions *pro* and *con* are generally of benefit, and bring to light information of value that might otherwise be hid under a bushel. The no-water-for-chicks-theory, however, brother Hooper must remember, as far as we are individually concerned, was not formed from any "*uncertain* experiments." At the Timonium Fair, last September, Plymouth Rock chicks which won first and second premiums, and which were so noticeable for their extra size and brilliant plumage, were raised by these same "*uncertain* experiments." My White Leghorn chicks, which were *larger* than some of the *old or mature Leghorns*, were also in their young chickenhood days *not* drinkers. As I have neither of these varieties now for sale, this need not be construed as an adv. If Mr. Hooper will kindly wait until the June issue, I will give him "*facts*" from others who have tried the plan, and then, perhaps, he may admit when chicks are PROPERLY fed with moist food the idea is of a more practical than theoretical nature. That "*no fowls*" need water, (or such an idea is, or ever has been advocated,) in England, is *new to me*—and I get weekly the two leading poultry journals published there—but we must all live and learn. G. O. B.

CRACKED CORN is not good for very young fowls, but to gratify that propensity of their nature we must give them *something* to pick at. Millet is very good for this purpose when the chickens are from one to fourteen days old. Better after that period is some kind of small corn.

The Apiary.

Bee Notes for May.

Owing to the backwardness of the season, last month's notes will be in order for the beginning of this month, unless the season comes rapidly forward.

Continue to feed sparingly till the bloom appears, and should the hives become overcrowded with bees give room for storing by adding a box at a time, and do not discourage the bees by giving them too much room. Every swarm of bees can be induced to work in surplus boxes if commenced with in time, and room given in proportion to the strength of the colony. Spread the combs, in strong colonies, about every six days, and guard against robbing in opening the hives and in feeding, for unless you are careful a little honey carelessly left about will cause the strong colonies to attack the weak ones, and demoralization will follow throughout the season—with such as obtain dishonest stores.

Kill every miller and worm you may see, as each will raise several generations during summer, and by destroying them early much can be saved.

After such a loss in bees, all over the country, the moth will take possession and reign supreme, unless the old hives are cleaned out and the combs melted up or protected from their ravages—look well to this matter.

Reinforce all weak swarms by giving a frame of hatching brood, placed in the centre of the bees. Don't throw away good brood combs because dark and mouldy, cleanse them by washing in clear water, and shake the water from the cells, or use the Honey Extractor for this purpose if you have one. A good syringe answers very well for washing. Combs in which the bees died should have all dead ones taken out, even if necessary to scrape away some of the cells.

As soon as drones hatch, the *strongest* swarms can be divided or swarmed artificially. The best way to do this is to remove the old hive to a new spot in the middle of the day, and remove the comb with the queen on it to a new hive and insert a frame filled with foundation, or an empty comb, should you have one, where you took that one from which contains the queen. Contract the entrance to one inch that the brood may not become chilled. Place the new hive with queen on *old stand* and put in four frames of foundation or empty combs and division board, and the work is done.

If you have any poor swarms they can now be given to those deprived of their queens; but in this case, the hives *made* queenless should occupy the place of the weak ones you wish to unite, that the loss of their old bees may not occur by breaking up their home. If you have extra queens on hand they also could be introduced to the motherless colonies safely.

Don't attempt to more than *double* your colonies, unless skilled in building up—a small increase will pay best. June this season will be the swarming month. If you have not already got your cedar bush planted and your mullen stocks tied in position, don't delay it if *natural*

swarming is to be practiced. I have been asked by several of the readers of *The American Farmer* "how I do it," and as many others might wish to be further enlightened, I will say:—A bush seven feet tall of our red cedar is best. Drive four stakes into the ground, just so close you can set the bush up in position among them, and be retained through any storm that might occur. Stakes four feet long driven eighteen inches into the earth will do. Now, when the bees have clustered, all you have to do is to raise up your cedar bush, carry it to the hive—swarm and all—and shake the bees upon the hiving sheet or clean spot on the ground where the hive stands; replace the bush at once, as many will take wing and go back to the spot where the bush stood, and if it is not there will go back to their old home. Usually two shakings of the bush will secure the best part of the swarm. I place the *new* swarm on the old stand and remove the old hive to a new stand, contract the entrance, and all trouble is ended for the season, for usually they will not send out a second swarm when this course is pursued. To make all *sure* open the hive at the end of a week and cut out all but the most promising queen cell.

If honey is wanted keep from swarming by giving them room to breed in the brood chamber, by giving empty combs or using the extractor and surplus store room as they require it.

Every *strong stock* should have access to one or two surplus boxes early this month, where the Perfection Box is used, and where a large crop of honey is looked for, that they may not get the swarming fever. When once begun it hard to cure, unless by dividing, when surplus honey would be out of the question in ordinary cases.

Watch the empty combs, and expose to the fumes of burning sulphur if any appearance of the moth among them, and keep in a close box or hung up in a cool room or dry cellar.

Those who wish to Italianize by removing their old queens when they swarm, should have the queens in readiness to be introduced. Order of some near and reliable breeder and buy a good queen. Cheap queens will prove cheap—as in all other branches of business. The best will usually prove the cheapest. L.

Sunny Side Apiary, Baltimore.

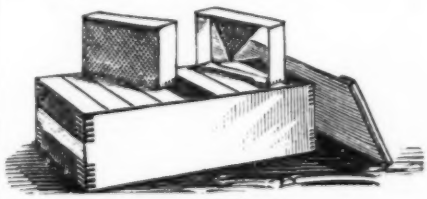
Surplus Honey.

How to obtain it with least trouble and in best condition.

After an experience of over twenty years with sections and section box honey, or comb honey, I feel I can give your readers a correct and impartial opinion upon the above subject. During the early days of the Langstroth Hive it was then in order to have the surplus honey stored in square boxes holding from five to eight pounds, or six boxes to the hive, each occupying a position over a hole cut through the honey board through which the bees had to pass to reach the surplus storing room. These boxes would hold three and four combs, and pollen would be stored with the honey, and in consequence would injure its sale.

From this the four pound square two-comb box, with four sides of glass, was tried to remedy the evil, but with like success, although many times a fine crop was secured in this form. But the demand for a smaller package led me to adopt the one-comb two pound glassed section, also to be used with honey board, arranged in box—fourteen boxes to the set—which I used for many years with success, and from which the present form I am about to describe emanated. The market called for a lighter and more attractive package without glass, as "consumers had become tired buying glass and wood for a luxury," to use the expression of one of our leading grocers, and I accordingly decided to abandon it and adopt a package that could be made to suit the wants of the grocer and consumer. From fourteen sections I doubled to twenty-eight, and used them with the tin and wood separators, brought forward by the late Richard Colvin of this city, to whom, I may say, the science of bee keeping owes more (Langstroth excepted,) than to any other man, he being *the first* to import the Italian and Syrian bees, to bring out the sections and separators for both the brood and surplus frames, (which are so extensively used by our leading apiarians of the present date,) and many more improvements of value of which I might speak.

After abandoning the glassed section for two seasons I had anything but success in getting my surplus honey stored in an attractive form, and the seasons of 1876 and 1877 at a cost of a fine crop of honey being ruined by the tin separators, to which every comb had been attached in the clamps, and had to be cut into cans and sold in bulk at less than half price. From my previous management with the glassed sections, I hit upon the box and sections I now bring before the bee keepers of the country, which is styled by some as the "Baltimore Clamp," but which a friend interested in my experiments applied the name of "Perfection Box," although there are several in the market under that name. From the experience of the last three seasons I can truly say I want nothing better.



THE PERFECTION BOX.

The boxes are made by dove-tailing four rabbeted pieces (that hold the end observing glasses in position) into the sides. A groove is cut one-eighth of an inch deep and one-eighth of an inch from the lower edge into which a strip of tin or zinc is slipped, and upon this metal stands the sections. To the Langstroth Hive are used three of the one and one-half pound section clamps—each containing 9 sections 6½x5 inches, or four clamps, containing nine each of the 4½x4½x1½ one pound sections. These are placed across the hive from side to side, and the sections

are of course lengthwise the hive. Each section I prime with a piece of comb or foundation from 1¼ inch (triangular) to 3½ inch, and fill the centre section full, as a ladder for the bees to run up on to commence their work.

To attach the bits of white comb, or the triangular foundation starters, to the sections, I use a small tin pan about eight inches long, three inches deep and four inches wide—as here illustrated.

A piece of tin having both edges folded is so arranged that it can be adjusted to any desired depth in the melted wax and rosin, of which I use two parts wax and one of rosin. Upon a small piece of board I fasten a piece of thin wood, three or four inches in length and one in width, (three-sixteenths of an inch in thickness is about right); to this piece is nailed another similar piece and projecting towards you three-quarters of an inch. Under this projecting strip I slip the section, and the centre of the top piece, to which the foundation is to be attached, will come exact every time.

Dip the edge of the comb or foundation upon the guage in the wax, and immediately set in position beside the little strip of wood. They can be set very rapidly after a little practice, and every one will remain firm. Place the sections in the box as fast as they are completed and they will remain all true to their place. There are a great many devices for doing this work, but I prefer this to any other I have ever tried. The hive *must* in all cases set perfectly level from side to side, and inclined down rear to front by placing a two by four inch piece of scantling the four inch way at rear and two inch in front, which gives it about the right pitch. As the boxes contain *no separators whatever*, it is of the *utmost importance* that these directions should be carried out in order to secure straight and uniform blocks of honey.

After a box has become filled and while the bees are sealing it up another can be slipped underneath, when all the lost time that would occur in leaving until fully capped will be utilized by having the under box nearly filled. In many cases I have had three full sets on the hives at a time. Another important item respecting the use of this box, and one that should not go by unnoticed, is the fact that the bees will go into them *earlier* in the season if but one or two are given them at the proper time. I had boxes filled from the finest blossoms last season of the most luscious nectar. It is *a fact that bees are discouraged by opening over their heads a space large enough to contain twice their numbers*, and many times I have seen them *swarm off* rather than go to work in such a store room; while with the Perfection Box, applied from time to time as their wants demand, ninety-nine in every one hundred will readily go into them and continue to work with uninterrupted energy throughout the honey season, and scarcely a swarm will issue.

This box is made to fit any hive in use, including the old box, or "gum," from which I have seen as good results as was obtained from many of a more modern pattern. L.

Sunny Side Apiary, Baltimore.

CORRECTION.—In the article in our April number on "Bee-Keeping and Bee-Hives," by a typographical error, the size of Langstroth frame was made 19½ instead of 9½ inches high.

Horticulture.

The American Pomological Society.

The eighteenth biennial session will be held in Boston, commencing Wednesday, September 14th, 1881, at 10 o'clock A. M., and continuing for three days, at which time the Annual Exhibition of the Massachusetts Horticultural Society will give additional interest to the occasion.

All Horticultural, Pomological, Agricultural, and other kindred associations in the United States and British Provinces, are invited to send delegations as large as they may deem expedient; and all persons interested in the cultivation of fruits are invited to be present, and take seats in the Convention. It is earnestly hoped that there will be a full attendance of delegates from all quarters of our country, thereby stimulating more extensive cultivation by the concentrated information and experience of cultivators, and aiding the Society in perfecting its Catalogue of Fruits. This session will be held at the home of its President, where, after an interval of years, occasioned by ill health and a serious accident, he hopes to have the pleasure of meeting, not only his old friends, but others from the various sections of our country, and again unite heart and hand with friends for the promotion of the objects of the Society.

When we consider the importance of fruit culture in North America, its progress during the last thirty years under the beneficent action of this Society, its moral, social, and sanitary influence, and the increasing demand for its products both in this country and Europe, rendering it a source of national wealth, we feel justified in urging the attendance of all who are interested in the welfare of our country, and the development of its wonderful resources in this branch of industry.

Members, delegates, and societies are requested to contribute specimens of the fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology. The sense of the last meeting of the Society was that the exhibition of large collections of fruit is not desirable, but that the show of fruits should be confined mainly to new or rare varieties and remarkable specimens, or such as being peculiar to any locality, or for any other reason, possess special interest. Intending contributors—whether as States, Societies, or individuals—will oblige by giving notice as far as possible, and at an early date, what quantity

they propose to exhibit. Three specimens of a variety will be sufficient, except in fruits of special interest. Each contributor is requested to prepare a complete list of his fruits, that a report of all the varieties entered may be submitted to the meeting as early as practicable. A limited number of Wilder Medals will be awarded to objects of *special* merit.

Packages of fruits, with the names of the contributors, may be addressed as follows: "AMERICAN POMOLOGICAL SOCIETY, BOSTON, care of MASSACHUSETTS HORTICULTURAL SOCIETY." Freight and express charges should be prepaid. The Hon. Marshall P. Wilder, of Boston, Mass., is President, and Robert Manning, of Salem, Mass., is Secretary.

Maryland Horticultural Society.

The April Show, held on the 6th, at the Academy of Music, was a very handsome one, the display of Azaleas being particularly large and effective. One of the features of the exhibition was a large model of a carpet bed of foliage plants, arranged by A. L. Black. The collection of plants from Patterson Park was conspicuous for their good condition and abundant bloom, receiving special commendation from the judges.

The following awards were made: Best six stove or greenhouse plants, Certificate of Merit; best six Ferns, $2, R. J. Halliday; best twelve Azaleas, $3, R. W. L. Rasin; best three Azalea Mollis, $2, S. Feast & Sons; best six double Geraniums, $2, best fifty bedding plants, $3, best six Cinerarias, $2, best twenty-four cut Pansies, $1, Rd. Cromwell; best ten Orchids, $3, W. H. Perot; best model of ribbon gardening, $3, best basket cut flowers, $2, A. L. Black; best twelve cut Roses, $2, Robt. Patterson; best collection cut flowers, $2, best hand boquet, $1, John Cook; best six Hyacinths, $1, W. H. Wehrhane. Special commendation to general collection of plants from Patterson Park; Combretium from S. Feast & Sons, and Seedling Camellias of Jas. Pentland.

At the meeting of the Society, an interesting paper was read by Dr. Bolling W. Barton on the distribution of plant life and the agencies producing it.

The May meeting and show will be held on Wednesday, May 4th, at the Academy of Music from 2.30 to 10 P. M. At the meeting an address will be delivered by Mr. Wm. T. Sedgwick of the Johns Hopkins University on the Life History of Ferns.

Apples for Maryland.

Messrs. Editors American Farmer:

The apples best suited to this locality are the five following varieties: York Imperial, Rawle's Janet, Ben Davis, Smith's Cider, Shipley Green.

Shipley Green is one of the very best keepers and a regular bearer always. We try to pick our apples in the dark of the moon in September, assort out all unsound and faulty apples and then barrel up and keep in a dry place.

Balto. Co., April 26, 1881. J. N. SHAUCK.

Landscape Gardening.

The laying out of grounds is an art or a trade. It includes good roads and paths laid down where needed and plenty of trees. Is there anything more than this in the laying out of grounds? Is there any special aptitude requisite in managing the matter? I think there is, and that it is an art as yet, in this country, almost in its infancy, and yet an art instinctively appreciated by cultivated persons wherever it declares itself, whether upon a small or a large scale.

We have admirable engineers who can lay down an approach or other road with easy grades and great grace, so far as the curves count for grace, and we have gardeners who lay out flower beds and grounds for shrubbery according to the newest style, and with independent beauties in themselves; but it is quite possible for both these classes of workers to fill their designs admirably and yet steer clear of the great principles of the art. I discuss it as an art which takes in its purview good engineering and good architectural work, with good gardening, and even good farming, if you please; but which looks to their perfect accordance and which dominates, in a certain sense, the individual arts named, and accomplishes out of the labors of each a congruous and captivating whole. They may stand side by side upon a given estate, and yet for want of due conception of what the landscape really demands for its completed charms, the effect may be incongruous and unsatisfactory.

Over and over again a wealthy proprietor seeks to supply the somewhat that is lacking by inordinate and cumulative expenditure. He may thus make beholders wonder and gaze; he may also secure a great assemblage of individual beauties, but the charming evenness of effect, which shall make his place an example of taste and a perpetual delight, is somehow wanting.

The true art of landscape gardening lies in such disposition of road-ways, plantations, walks and buildings, as shall most effectually develop all the natural beauties of the land under treatment without conflicting, but rather in harmony with the uses to which such lands may be devoted. Thus, on a private estate, home interests and conveniences must be kept steadily in view, and these must never be sacrificed for the production of picturesque effects, however striking in itself. But in a public park, any good design must show great amplitude of roadway and broad open spaces for the desport of the multitude. Upon farm lands, which I hold to be not without the domain of landscape treatment, there must be due regard to the offices of rural economy, and the decorative features may be safely brought out in the shape of gate-ways, belts of protecting shrubbery, or scattered coppices upon the pasture lands.

Upon ground entirely level, the range of possible treatment is of course very much limited, but the true artist in landscape effect can do something even with this. No architect worthy of the name despairs if he is confined, in his own art to four walls of even height; if he loves it he finds decorative resources.

Baltimore, Md. JOHN FEAST, SR.

Evergreen Gateways.

In Scott's *Suburban Home Grounds* the following directions for making these ornamental gateways are given. We are indebted to Mr. Purdy for the cuts.

There are many species of evergreens which may be planted on each side of the gateways of ordinary footwalks so as to be made into charming arches over the entrance. With patience and annual care these can be perfected within about ten years, but they will also afford most pleasing labor from the beginning; and the infantile graces of the trees, which are year by year to be developed into verdant arches, will probably afford quite as much pleasure in their early growth as in their perfected forms. In the descriptions of the trees which are suitable for this kind of topiary work, the mode of managing them will be given in detail. We here introduce the same cuts to give a hint of the effect intended, though, when well grown, such arches are far more beautiful than our engravings can even suggest.

Fig. 1.

Fig. 1 shows a pair of hemlocks planted inside of a gateway, and grown to a height of ten to twelve feet, and only trimmed on the inside.

Fig. 2 shows the effect at the end of ten years—the tops of the two trees having been twisted together so as to grow as one tree over the centre of the arch, and all parts trimmed year by year to the form illustrated. Where evergreens are to be planted for this purpose, the fence should curve inwards to the gate, as shown by the transverse section (Fig. 3), so that trees designed to form the arch can be placed on a line with the posts and two or three feet from them. All this topiary work may be a substitute for expensive gateways, or it may, with equal propriety, be introduced as an accessory decoration, where the posts are not of a massive, or a highly ornate character. In the latter case, whatever beauty of design and workmanship has been wrought out in stone should not be deliberately concealed by such forms of verdure.

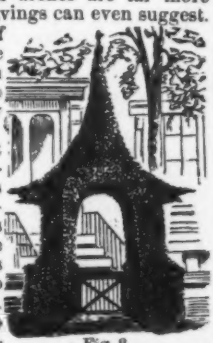


Fig. 2.

Fig. 3.

Double White Lilacs.—Double lilacs are not uncommon in our best collections, but double white has not been known. Lemoine, of Nancy, France, has raised one very double, and of a clear, snow white.

Vegetable Garden.—May.

Tomatoes in frames should be well hardened preparatory to setting out by leaving the sashes off day and night, except when there is appearance of frost. Meanwhile the ground should be prepared and so distinctly marked off that a moderate rain will not obliterate the marks. This is a very important point with all crops that have to be transplanted.

String Beans are supposed to grow anywhere, and, indeed, we can seldom afford to give them our best land; but the crop is never seen at its best unless grown on good rich land, and the seed dropped three or four inches apart in the row. On thin land here the crop often dries up altogether.

Now is a good time to get in all manner of root crops, both for family use and for the cattle supply. My ideal of the best mode of raising crops in general is to manure broadcast, plow under, and plant on the flat. Melons may be an exception to manuring broadcast and sweet potatoes to planting on the flat, but as a rule I would expect the highest results under this treatment. Still, when the manure pile is small and the area to be cultivated is great, we must resort to what in Yankeedom is termed tickling in the hill or drill. For roots, furrows are opened, a thin streak of manure is inserted, the ridge made with the plow is smoothed off with the rake, the seed sown and the ground rolled. This is probably the best mode of procedure under the circumstances.

The 10th of the month is the latest date at which I succeed with peas. Summer squash should be sown in rows four feet apart and the seed nine inches to a foot in the row. Two or three sowings should be made in the course of the season. Towards the end of the month melons and cucumbers may be planted in hills or drills, and soon after those forwarded on sods set out. I may here observe that it is well to adhere to the old distinction between forcing and forwarding crops. We *force* cucumbers when we bring them to full fruition under glass; we *forward* them when we merely start the plants.

Several plantings of corn will be made this month, and lima beans from the 10th onward. Setting the seed with its eye in a certain position is more trouble than it is worth, if, indeed, there is anything in it. Peppers and egg plants had better be planted side by side in well enriched land.

Most of the sowing and planting will now be over until the second crops go in in July. But considerable time will be taken up in gathering the early vegetables and keeping down weeds. In small gardens several pickings of peas are usually made from the same vines, but that is impracticable with me at least. When the bulk of the crop is ready for use we pull up enough of the vines to make a mess—twelve bushels of fat pods here—cart them under the willows and sit in the shade during the tedious operation of gathering, although sometimes we find time to make two pickings, one before vines are pulled and one after.

The French blanch their asparagus almost to the tips; we, on the contrary, find the under-

ground portion too tough to be eaten. How is that? This I believe to be the true explanation: The blanching with us is caused by the unnatural custom of planting five to seven inches below the surface; the French gardeners, on the contrary, plant in trenches, earth up during the cutting season, and when that is over take pains to remove the earth. Should like to know what others think on this subject.

Baltimore Co., Md. JOHN WATSON.

Potato Growing—Use of Straw.

Messrs. Editors American Farmer:

I give my experience respecting the growing of potatoes under straw. A patch of four bushels' planting (Early Rose) was put in about the middle of April, 1880. The land was level and loamy, of a clover and timothy sod. The rows were three feet apart and run out with a two-horse plow twice in a row, so as to get the potato planted deep, say five or six inches. The potatoes were cut two eyes to the piece and planted fourteen inches in the drill. They were covered with a single horse plow with two furrows. Before they made their appearance a harrow was set to work and leveled and worked the ground well. On half the patch (eight rows) straw was put to the depth of four to six inches sufficient to cover the ground from sight. The potatoes in the other eight rows came up the soonest, because they had not the straw to grow through, and of course they received the attention of the bugs directly. The straw-covered were not troubled with them. It was not long after that those under the straw could be seen. Those not covered were worked with drag and double shovel plow, in all three times, no hoeing being done because they were clean. They being well worked seemed to have the start of the straw-covered, and looked well while it was seasonable, but dry weather came on and those under the straw got ahead. All during the dry weather there was sufficient moisture under the straw for the potatoes. The mulch kept down all weeds and grass, whereas the other part was thickly covered with fox-tail grass at time of digging. The straw-covered remained green a long time after the vines of the other part had died. Two rows of the straw-covered were dug, the straw being removed, fourteen bushels of large ones, some weighing a pound, and two bushels of the smaller size; this from a-half of a bushel planting, each row taking a peck. Only two of the eight rows were measured, and we judged from them what the other six would yield. Those not covered were dug and found to be inferior in every respect, half as large and half the quality, notwithstanding their looking so promising as to be admired by all who saw them growing. The dry weather came when they most needed the moisture. Moisture is indeed essential to potato growing. The fertilizer used was the Agency's Favorite, two hundred pounds sown on the patch in the drill.

In another patch a few rows were planted with straw put in the drill on the potato and then covered with earth. Good results were obtained in this way, so much so that those digging early potatoes for the table would look in these rows and find the largest.

I have planted with good results by filling the rows with coarse manure besides fertilizers. Generally, the clover sod is used with fertilizers, and when seasonable as high as thirty-two bushels from one would be gathered. If planted the proper depth and harrowed well before the potato is fully out of the ground, there is but little trouble, and the hilling or last working may be done with a double shovel. Some, though, prefer level working. If straw is put on, the rows need not be more than two feet apart. I expect to plant more this season in this way.

The ground covered last year with straw is planted this year in potatoes, and the same straw (it being rotten and short, having lain out all winter) put in the rows on the potatoes and then covered lightly. These will be cultivated, and if dry, will expect twenty-five bushels to one; if very seasonable, more. So you see the straw answers for two seasons; the land is bettered; a good crop the first year is had, and a prospect for a good one the second year, and the land still better because of the decay of the straw. If the fertilizer is very strong and used bountifully, it would be better to drag a stone or log tied to a rope or chain so as to mix it with the earth. It is better to put plaster on potatoes after cutting so as to dry them.

In planting potatoes care should be taken not to cover deep unless they are planted very early when the earth would very likely freeze. They should have the advantage of the sun's warmth, hence sprout the sooner. Early planted potatoes do the best. Last year in a patch of seventeen bushels' planting there was several days difference in planting the first and last half; and considerable difference could be seen in the yield. A good sod will require going twice with a plow to open the row sufficient, it will then be better for the reception of the fertilizer. One person to sow the fertilizer and two to drop the potatoes can keep up to the team that lays off the rows. One man with a single horse plow will then be kept busy covering—throwing two furrows on the potatoes. The horse to be kept out of the rows so as not to disturb the potatoes. W. S.

Baltimore Co., Md.

The Striped Potato Blister Beetle.

Of this insect, referred to in the April number of *The American Farmer*, we now give an engraving, that our readers may be enabled to identify it. Sometimes it is found with three black stripes on each wing-case instead of two.

THE JERUSALEM ARTICHOKE, besides being useful as a food for pigs, is used as table vegetable, and much relished by some.

The Gunpowder Farmers' Club.

The meeting for April was held on the 9th at the farm of B. McL. Hardisty. The tour of inspection showed that the farm, though not a very large one, was, with the buildings, in good order, the grain fields looking less promising than last year, but comparing favorably with most of those in the vicinity.

Half Hour for Questions.

In sowing grass seed on wheat lands should the seed be sown before or after harrowing? D. Gorsuch and E. Scott would sow *before* harrowing. *q.* What kind of harrow? *a.* Thomas Harrow without weight. The ground should be thoroughly dried. *q.* Would it be any loss to delay harrowing a week after the seed are sown? D. G.—No trouble if weather keeps cool; if warm, seed will sprout. S. M. Price.—Would prefer to harrow at once. *q.* In harrowing, harrow with the drill or across? J. D. Matthews.—Across. It cultivates the wheat. D. G.—It covers too much for him. He prefers not to cross drill. S. M. Price.—Has seen decided advantage to wheat from harrowing in spring, and not only to wheat, but to the clover as well. *q.* What is the best way to set in grass about three acres where wheat and grass are winter killed? S. M. Price.—With him all attempts to get sets with oats fail. Would plow and harrow and sow grass seed alone. D. G. coincides.

J. D. M.—Has a truck patch to get in grass—how shall he do it, ground being rough and a stiff heavy clay? D. G. would plow and sow in oats. A. C. Scott.—Has sown about one-half the usual quantity of Hungarian seed, sowed clover with it, and got a good set. S. M. P.—Puts oats on and sows grass with them.

q. Has any member tried winter oats? S. M. P. got some two years ago from the Agricultural Department and sowed them but has never seen them since.

Crop Reports.

This being the meeting for the submission of reports of their crops for the year, a number were presented. Amongst them John D. Matthews reported an average of 13⅔ barrels of corn to the acre; Ed. Scott 24⅔ bushels wheat; A. C. Scott 26 bushels barley, and D. Gorsuch 1½ tons of hay.

How can we Economize in our Fencing?

D. G.—By doing with less. All the law we want is the common law which would compel every person to care for his own stock. Then inside fences may be abolished, and outside ones made of wire.

Where fences must be used, worm-fences are the cheapest. Two panels make a rod and they can be put up by farm-hands. They last longer than any other fence, and require little overhauling. In his vicinity the cost of the several kinds of fencing was estimated as follows: Board, five boards high, $1.10; post and rail, five rails, 82, and wire, four wires, 60 cents per 16 feet. Rails cost 3 cents each and posts 18. One fence on his place has been in use forty years. *q.* Ought not the extra ground taken up by worm fences to be considered? *a.* Yes. It is calculated the crops lost in ground so unprofitable would pay interest on cost of board fence.

J. D. M. read an extract from an address delivered in 1874 by Henry C. Hallowell, showing the cost to the farming community of fences, and this led to a general and lively discussion of the whole subject, and while still under consideration the club adjourned.

Work for the Month—May.

Now are called fully into use all the energies the farmer can command. Active, well-directed, timely action is now the watchword. Yet provident forethought, though it will not prevent the press of work, will obviate the necessity for hurry, and system, well-devised and strictly adhered to, will result in the smooth carrying out of your plans without hitch or halt.

Corn Planting.—So much has been said upon this subject, and the leading article in this issue from an authoritative source goes so fully into the details of the management of the crop that little remains for us to add to what has been already presented. Heavy manuring as the case will allow, good plowing and preparation, so that a fine tilth is secured, these are the essentials to a crop, and these attended to, and diligent cultivation given afterwards, all these depends on the seasons. Some farmers like to give a top dressing to their corn when it comes up, or at the first working. A good material for this is a mixture of hen manure and plaster, a small handful to the hill.

Root Crops.—Sugar Beets and Mangels should be sown this month, and we refer to directions heretofore given. Parsnips and Carrots should also go in as soon as possible.

Potatoes.—Some planters prefer to put their main crop in this month, whilst others prefer waiting till June, or plant in each month. In either event the land, to do well, must be in good heart and have considerable vegetable mould in its composition. A good sod, turned, with some well-rotted compost or manure in the drills, gives a cool moist bed for the tuber, and generally brings paying crops. The inorganic or mineral fertilizers, such as ashes, superphosphates, lime and salt, are used with advantage on the crop, and Peruvian guano is often most valuable. Allow no weeds to grow and keep the soil perfectly stirred. See in this issue the result of covering with straw.

Tobacco.—It is not yet too late to make tobacco beds. Good sized plants—all things, soil, weather, manipulation and fertilizer suiting—can be produced in from four to six weeks; but the plants being thus forced must be tender. Stripping should now be hurried up. Tobacco in bulk must be watched; if warm, shake out dry and pack up again. Haul out manure and prepare for planting.

There is much gained or lost by careless management in preparing the land for plants. For fine or coarse tobacco follow our advice for last month. For fine tobacco plant on light land

two and a-half by two feet; for heavy, coarse tobacco, plant three by three feet.

Fodder Corn.—That sown early is generally more easily cured, the season when this work comes on being drier than for that sown later. That to be fed green ought to be sown in succession, say every two or three weeks. Sow in drills from two and a-half to three feet wide, and let the stalks stand ten or twelve to the foot. Cultivate occasionally and cut when it tassels freely.

Millet and Hungarian.—From now on to the first of July these crops may be put in, and they will be found a valuable addition to the provision of forage. Unless the seed is to be saved, cut before the seed matures, otherwise the straw becomes hard and woody. About a bushel of seed to the acre is the right quantity to sow.

The Orchard and Fruit Garden.

The plan of seeding pear and apple orchards to grass, as advocated by some horticultural writers, does not seem to gain in favor with American fruit growers. Occasionally we notice a writer who will recommend clean and thorough tillage for the first three or four years after planting, when the orchard can be seeded with grass, accomplishing better results thereby than would be obtained by a continuation of the clean tillage system. On the other hand we find no less frequently, writers setting forth testimony procured by actual test, which in all its bearings is condemnatory of the plan of growing grass in the orchard; two or three instances where parties tried both plans in the same orchard, seeding one part to grass, (and annually tilling in some crop requiring a clean and mellow surface the other,) at the end of three or four years represent a contrast strongly in favor of clean culture. If the writers state facts, which is scarcely otherwise presumable, the evidence thus far adduced preponderates largely in favor of what is denominated "thorough culture," which we think is to some extent due to the fact that in the one plan *labor* is the key to success, which in the other—that is the grass practice—it is more a question of *capital*, and by an intelligent practice of either plan health and vigor of trees can be maintained, and good results in the production of fruit assured.

That acres, in American fruit growing, is too often the aim—resulting as frequently in the very tangible fact that it is at the expense of proper health and thrift of the trees, will scarcely be questioned in this enlightened day. That orchards of whatever kind, if expected to produce fine fruit, and add annually a proper proportion of wood growth, *must* have a due measure of feed, in the form of fertilizers of some kind; that this is absolutely indispensable, if the orchard be sown in grass, is manifested more plainly than if otherwise managed, because the soil that is kept loose by frequent stirring receives more benefit from atmospheric sources than it would if left untilled; and in that fact, there perhaps is a saving so far as a direct outlay of cash goes for manures. In so far as fruit growing in our own State is concerned, it is a fact that cannot be gainsaid, that the land devoted to orchards generally is greatly below that standard of fertility which, outside of uncontrollable circumstances and influences such as late frosts, &c., assures a full measure of success. It is, however, gratifying to know that our fruit growers are steadily but unmistakably realizing this fact, and that in the near future radical reform in that particular may be safely predicted. But as we have wandered somewhat from the path marked out for this department of our journal, we will for the present forbear any further observations on that topic, and turn to the smaller details.

In the plowing of orchards, great care should be exercised by the plowman not to let the plow run too deep when close to the trees. Young trees, where the roots have not attained sufficient size to resist the force of the plow, sustain great injury when thrown upon the mercy of a careless plowman; as not unfrequently many of the leading roots through which the tree draws its food from the soil are cut or torn by the plow when guided by indifferent workmen. We have seen instances where the roots were so completely bobbed as to cause to fall over from the effects of rain storms. Again we have had plowmen that could not plow our orchards without nicking or breaking the bark on many of the trees by the single-trees striking or the traces chafing the trees as the team passed. This can and should be avoided by a proper regulation of the running of the plow used, setting the clevis as far to the side of the beam from the trees as is necessary.

In the FRUIT GARDEN weeds will be requiring some attention this month—kill them before they are "up," it is easier and saves time. Strawberry plants set last fall or this spring—if mulching was not resorted to—will require the surface of the soil around and about them to be frequently stirred and kept level and mellow by the use of the hoe. The same suggestion applies to new plantings of small fruits generally. The soil should not be taxed with a growth of weeds, and fruit too. Fruiting beds of raspberries and blackberries should have the canes secured against damage by wind-storms by tying neatly to stakes. While gooseberry and currant bushes will be surprisingly benefitted by a good heavy mulching of coarse and otherwise useless rubbish—if in rows four feet apart, let the mulching extend from one row to the other—almost anything that will form a covering for the soil will answer.

Virginia Grain in Baltimore.

Editors American Farmer:

Your city of Baltimore has been the chief market for the shipment of grain and the purchase of supplies for the people of Virginia for years, to the detriment of our own cities. This grows out of the fact that there are greater facilities for shipping, and it is more accessible to much of the State than Richmond or Norfolk.

Since the introduction of the elevator system in Baltimore there has been much complaint about the manner in which they are conducted, one of which I will mention. A cargo of 2,500

bushels (by weight) of grain was shipped from this port last spring by one of our merchants. The captain asked the shipper if the grain overrun would he divide with him, to which the merchant assented. This cargo overrun 100 bushels. Again during the past winter the same merchant shipped 2,000 bushels by the same captain, and it fell short eighty bushels. I asked the merchant how he accounted for this. He said, in the spring the captain had money, but none when the last cargo was shipped, and he could only infer he fed the weighers in the first instance, but was unable to do so with the last cargo—hence the difference. He had been shipping by this captain for years and had perfect confidence in his integrity. There is a report in circulation that an extensive firm of your city were swindled out of a large amount by one of these elevators. Will you please explain through your next issue how these elevators are conducted, who is responsible for their proper management, and how the shippers' interests are protected? The captains say that fair weights are apparently given, but that the scales are capable of being regulated to weigh more or less at pleasure, and that the grain is handled in such a way they can tell nothing about it. Some refuse now to take grain by weight, and of course this fraud (if such it be) must fall upon the farmers, if they should continue to ship to Baltimore.

I have observed for a year or two past in the quotations of grain in your market Maryland wheat is quoted sometimes for as much as ten cents above Southern grades. Is this a grade of wheat peculiar to the State of Maryland and not grown elsewhere, or are the buyers disposed to pay a bonus for the product of their own State over others? Virginia has contributed as much to the prosperity and building up of Baltimore as your own State, and it is due to the farmers of this State that the above questions should be answered, and fully and frankly answered.

AUBREY H. JONES.

Tappahannock, Va., April 8, 1881.

[As it is an infrequent, we might almost say a rare, thing for sailing vessels to be ordered to the railway elevators, either at Canton or Locust Point, we assume our correspondent refers to the floating elevators, of which there are probably a dozen or more at work in our harbor, operated as private enterprises, and with different owners. But should a vessel be discharged at the former it is impracticable for its captain to know who is to weigh his grain; whilst on the floating elevators there are three parties concerned in having the correct weights—the buyer, the seller and the owner of the elevator, and to accomplish a fraud would require that all should connive at it, and in the case of the suggested bribery, the captain of the vessel must also be a scoundrel. It is just to believe such a concatenation is seldom met. It is likely enough that a cargo made up of numerous small lots, weighed by different hands with the turn of the scale in the vessel's favor each time, will overrun when discharged, but except by the captain's negligence, it is hard to see how it can run short.

Governments sometimes give bonuses for certain products, but among keen-eyed traders no such paternal system prevails—*quality* deciding price. The Maryland wheat is a long berried, thin skinned grain, much in request by the millers of fancy grades of flour, and produced on the best wheat soils of our State, such as those of Washington, Frederick and Talbot counties. If our correspondent and his neighbors will send a corresponding wheat they will get the same prices, and "no questions asked" as to its origin. —*Eds. A. F.*]

Maryland Granges.

GLENWOOD, No. 41, Howard Co., dedicated its new hall on April 26th, the State Master performing the service, assisted by George Clark as Master of Ceremonies. Quite a goodly number of patrons being in attendance, including visitors from sister granges in Howard and Montgomery. The building is a commodious one, and cost about $1200. After a bounteous repast, addresses were delivered by Rev. Orlando Hutton, D. D., H. O. Devries, Master of the State Grange, and Wm. B. Sands, Lecturer of Baltimore Co. Grange.

ELKTON, No. 145, CECIL Co., celebrated on the 19th of April, its Sixth Anniversary by a public meeting. This grange is one of the largest in the State, and its membership includes many enthusiastic upholders of the principles of the Order. An inviting dinner had been prepared by the sisters, to which the members and their guests did full justice, after which there was an address by State Master Devries, which from the reports in the local papers was an admirable effort, and very well received. Other speeches were made by Rev. John Squier and George A. Blake, Esq., friendly outsiders, the proceedings being interspersed by music.

CHOPTANK DISTRICT, No. 3, has elected the following officers for the ensuing year: M., John C. Barrett; O., William E. Barton; L., Dr. P. S. Reynolds; St., John Outram; As. St., Ed. Woodal; Ch., James A. Ridgaway; T., Jno. W. Knotts; Sec., Dr. Charles H. Rose; G. K., I. F. Saulsberry; C., Mrs. John C. Bartlett; P., Mrs. John W. Knotts; F., Miss E. M. Goldsborough; L. A. S., Miss Elma Hopkins.

CHAPEL GRANGE, No. 65.—M., Jas. A. Ridgaway; O., P. A. Morgan; L., James T. Wood; St., Thomas P. Hopkins; As. St., A. Smith; Ch., C. M. Jump; T., G. H. Tarbutton; Sec., George S. Lightner; G. K., G. R. Wooters; C., Mrs. Jas. T. Wood; P., Mrs. G. H. Tarbutton; F., Mrs. C. R. Wooters; L. A. S., Miss Clara A. Ridgaway.

MANTUA, No. 169, BALTIMORE Co, has elected the following officers for the present year: M., Charles W. Semmes; O., George Chilcoat; L., Dr. James J. Given; St., Edward Chilcoat; As.

St., J. G. Gent; Ch., Dr. James J. Given; T., Aquilla Chilcoat; Sec., O. W. Gent; G. K., Wm. D. Griffith; C., Mrs. Charles W. Semmes; P., Mrs. Harriet Gill; F., Miss Jerusha Fowble; L. A. S., Miss Annie Given.

ASBESTOS, No. 172, BALTIMORE CO.—In the report of the officers elected, there were inaccuracies in the names of the following: The As. St. is William E. Upton; Ch., Joseph Emmart; Sec., H. B. Arthur; G. K., John H. Kalb.

NEW GRANGE HALLS.—Fairlee, No. 3, Kent Co., and Limestone Valley, No. 80, Howard Co., have both determined to build homes for themselves, and the buildings will be erected during the coming summer.

Co-operation.

Messrs. Editors American Farmer:

Formerly labor was governed by power and powerful sovereigns. Then it was arrayed in arms for conquests and in the rearing of temples, pyramids and mausoleums, and was employed arbitrarily and wasted itself in things of little value. Now labor is employed in building railroads, canals, in telegraphs, in gas works, in sugar refineries, in petroleum, in manufactures, things of abiding usefulness. Capital has been created and has concentrated itself in few hands, and capitalists have taken the place of power and sovereignty of the old powers. We are threatened with worse than the primal curse, by the combination of millionaire capitalists. The useful results of labor are to be turned against us, the accumulation of labor are to be wrested from us, and useful purposes for which States granted corporative authority are to be managed entirely for the benefit of already gorged capitalists the power granted to facilitate trade, to save time, both working together to hasten exchanges.

The manufacture of all the necessaries of labor and agriculture, the manufacture of gas, the export of petroleum, and in fact every large and important interest is seized on and turned to the advantage of capitalists; and every transaction of the kind taxes labor and lessens the income of the laborer.

This disposition of capital in the hands of the few, has always existed. We see all the land in Great Britain absorbed by the few; we see the mill owners oppressing labor, and in this country since the world began never were the accumulations larger and the facilities of combination greater, or rendered more easy by the carelessness of legislation. These corporations can buy any and everything they require, and they have gone on slowly and surely until they have the legal power to wrest from you the power to restrain them.

See the condition of Ireland, England and Europe; turn your eyes to home; the serpent is entwining itself around the body of labor; capitalists are controlling every avenue of trade, manufacture and commerce—no exchange of products can be made uncontrolled by them. Legislation itself yields to them all their demands, high tariffs subserve their purposes, the laborer himself is made subservient to their will, and they are persuaded taxation is beneficial to themselves; and in truth political rings are agents working for their purposes, and seizing all the avenues to office, raising salaries for their own benefit, sacrificing and wasting the economies of the people, demoralizing and destroying all independence; selling and buying in open market and justly classed with capitalists as equally baneful.

Do not mistake our object We war not on capital, but the misuse of it, we denounce the wild hunt for, and the means used to get possession of office.

Has labor any defence left? We think it has, in what is known by the name of co-operation.

What is the object of and general result of co-operation? Its main object is to absorb and preserve the savings of labor, and to yield its fruits to the laborer himself, as the condensed vapor of the atmosphere, the small drops of water slowly falling from the cloud, fructifies the parched soil. So the small persistent savings of labor of many laborers combined soon swell into a mass, giving power—a power capable of returning to labor itself full returns—a power of employing labor, paying better upon better and free principles, not subjecting him to the caprices of a master. As the mass accumulates, it is used in the production of all the necessaries of labor, and as the mass grows, as it were, by what it feeds on, its power (governed by labor) extends itself into every avenue of manufacture and trade. It becomes a controlling power, it frees itself and labor from dependence on the large capitalists. It restrains the Ring politician. It has itself patronage to bestow. It saves the republic by controlling the demoralization of ring patriots; its faithful adoption will *scotch* the *snake!*

Has this plan been tried? It has, and successfully. The combination of a few poor *weavers* in England has in a few years accumulated millions, and its use continues in various parts of Great Britain advantageously to labor.

The Grange holds out some inducement to this way; its efforts have heretofore been weak; it lacks the faith produced by necessity; its members do not yet feel the clasp and fetters of the serpent. It is beginning to get its eyes opened, and it will, when it does, afford a strong nucleus to concentrate around. Yet neither outside labor nor the people should await the slow action of the Grange. Time is important. Capitalists will absorb every remaining avenue, our legislators will draw the fetters tighter around us and press us to death.

We have thus feebly attempted to arouse the people to their danger. Among our fifty million, there is not perhaps more than five thousand capitalists, yet they control a large crowd of followers. I have referred you to the distressed condition of the laboring class in Europe generally, to the large landed estates, to the large mill owner; to the general absorbtion of all the manufactures, including coal, iron and railroads. The laborer is a slave, absolutely the worst kind of a slave, as he must eat and his eating is dependent on his labor and his labor dependent on a master. Frequently he rebels, yet he is compelled to return to his servitude.

The Constitution authorizes taxation for the support of Government—your subsidized legislators tax you for the support of manufacturers.

All accumulation, all art, all science, all knowledge, is acquired by labor—and without is nothing worth, and the products of labor only are esteemed.

The great body of the people, all trades, all arts, all science, all knowledge, is interested in guarding the rights and independence of labor. Destroy these rights and liberty goes with it.

A.

Home Department.

Decorations for Country Homes.

In speaking of house decorations, we must understand that the fundamental principle with most of us should be *simplicity*. We are to ornament our necessities and occasionally add an object for decoration solely, but we are not to convert our rooms into china shops, or embroidery bazars, which is too frequently the case in city houses. The highest attainment in every art is purity and natural treatment, so it should be in the arrangement of our homes. A judicious taste is absolutely necessary to keep us from extremes.

The Walls.

Country houses, above all others, should be simple—the only trouble is they are apt to be too simple. For instance, our parlor is a big square room, which we make appear larger and more angular by whitewash and white paint. We may say that we cannot afford wall paper or walnut wood-work—but why should not a little color be mixed in the wash converting it into a pale blue, grey or salmon tint, and the wood-work painted to match, but of a much deeper tone? For example, take blue; the walls should be quite light, and the ceiling pearl or nearly white. The wood-work of windows painted to match the ceiling; the doors the same except that the large panels should be of blue, much deeper than the walls, and the moulding may be gilded if possible, or else should match the walls. Any girl of ordinary ability can do this painting herself at a very small expense, and will be amply repaid for her work. Against such a wall any pretty little object will be effective. Few of us possess fine paintings or engravings; next best comes good photographic views. Avoid chromos if possible, and do not hang the portraits of your dead grandfather, cousins or aunts in the parlor—they may be very dear to you, but do not oppress your friends when paying a visit, or taking a pleasant meal in your house, with visions of your departed relations.

If you have neither the paintings nor engravings, try to get a few fine photographs, and if these are not to be had, it is in good taste to have a group of nicely pressed ferns tacked against the wall, and occasionally a little bracket, holding a pretty cup and saucer or a little vase. If you can embroider—make a hanging for the bracket, of bright cloth worked in crewels; if not, cover the shelf with bright cloth or flannel, and let a fringe to match hang from the edge. So much for the walls. Now let us look to

The Furniture.

Most of us country people possess that which was purchased by our grandfathers, when the much-enduring horse hair was the only kind within reach of the ordinary farmer. Of course it is out of style now, and if we cannot afford to have it re-covered, we can procure some cretons or bright flowered calico, and make loose coverings that will give an air of cheerful comfort to the heavy furniture; only try not to have too much sameness—if the sofa and large chairs are covered with the calico have some light wicker chairs uncovered, and embroider a stripe of crash and have mounted on a folding chair, between stripes of dark red flannel. A few small tables, one by the sofa with a lamp upon it—others in corners with books, or vases of natural flowers—(do not use wax flowers or fruit in ornamenting the parlor); the tables should all have covers of some simple material—there are so many pretty styles, either embroidered or of bright flannels in bands of some plain foundation. Use natural flowers in every possible place, either cut or growing in pots, the latter are particularly appropriate in the open fire-place during the summer. Now you have a room that any one can enter with a feeling of delight—as a pure bright home-retreat, from the troubles of business or public life.

H. C.

Some Practical Suggestions for Emergencies, &c.

I confess to being a little flustered this morning by the arrival of unexpected company, so near the dinner hour as not to admit of going beyond my own larder for supplies, and therein was only the remains of Sunday's dinner. It being Monday, and also wash day, I had as usual endeavored to conform to the circumstance by depending upon the remnants of cold ham and turkey for my family, and hence my consternation. I made my friends kindly welcome, for I was really glad to see them, but aside from that, as a mere piece of strategy, it goes far toward covering a multitude of defects in material entertainment. I was compelled, however, to be excused for a time because no head but my own was equal to improvisiug a company dinner from present resources; fortunately there was a substitute at hand to supply my place in the parlor.

The clock indicated just fifty minutes before the arrival of dinner hour and my husband, which are universally simultaneous. The pantry shelf held one dish with what was left of a boiled ham, and another of cold turkey. Either of these being hard to improve upon, provided you have a hot dish of something else besides, I considered a moment which I should attack in order to provide the requisite hot one. Before deciding I concluded to interview the cook; I found she had, as she frequently does when depending on cold meats, prepared her mashed potatoes early in order to smooth them nicely in the vegetable dish and then brown it in the oven. These potatoes I at once appropriated to my own use, and left her to prepare others, as there was yet time for so doing. This supply of nicely prepared potato solved the problem. I took the

ham in hand, which having been cut in the middle as it should always be, the ends presented a nice and shapely appearance; the gap that yawned between I filled with my potato, smoothed it to the shape of the original ham, buttered its surface and placed it in the oven to brown. This only required part of my providential supply of potatoes, the rest I put in a sauce-pan, added nearly half a pound of butter, mixed it thoroughly with the potatoes, and when it was well mixed and heated poured gradually upon it milk enough to make a sufficient supply of soup for dinner. I seasoned this rather highly with pepper, salt, and some celery seed, pared an onion which I threw in whole in order that it might be removed before it went to table, and also that it should only impart a hint of its presence in the soup, and set it to boil. These preparations were quickly accomplished. I left this in charge of the cook with instructions to remove it to the back of the stove as soon as it boiled, and turned my attention next to the dessert. One is seldom without the means of make-shift in this department if there are preserves and cream in store, but I was, I think, much better provided on the occasion, there being a nice plain bread pudding upon the side-board, which for family use we never despise, and for festive occasions it is susceptible of considerable embellishment. A few pieces of cake remained in the box that were too stale for ordinary use; these I sliced thinly and dipped first into some domestic wine, laying them all over the top of my pudding. I then beat about a teacup of sweet cream into a light froth, added sugar and vanilla, and heaped it upon the top of all, making of my plain pudding a thing of beauty as well as a joy to the palate. I would like in this connection to impress upon the country housewife the superiority of cream for such purposes to the usual "merangue" made from the white of eggs. It is quite as easily made light, and a little forms considerable bulk thus beaten.

When these preparations were complete, and the cold turkey nicely sliced, I still had a quarter of an hour for setting the table. As this is on principle kept at all times as nearly as I would like it for company purposes, it was easily prepared. A little extension of the table, the laying of four additional plates, &c., fresh napkins for the guests, was all that was needed, and when my husband arrived I was ready to meet him with an untroubled brow. While the greetings were being made between my guests and my husband the soup was placed upon the table, and when dinner was announced I had no reason to blush over the simple neatly laid table, which with glass and plain china shining above a well-ironed tablecloth, and a moderate supply of nice clean silver; jelly and pickles, bread and butter, each nice of their kind, and tastefully arranged, left no hint of my guests being unexpected. My hastily concocted soup was enjoyed as it deserved to be. When this was removed, and my cook, with a clean white apron and otherwise neatly dressed, brought in the ham and set it before my husband, and the dish of turkey before me, with her fresh supply of potatoes, and of canned tomatoes, one on either side of the table; another of cold grits sliced and fried, and one of cold slaugh, made my table look nice enough for anybody, and I am sure satisfied my fastidious husband, as well as my guests.

My dessert formed a fitting supplement, and I came off with a comfortable sensation of having been greatly the gainer by resolutely accepting the situation and doing my best, instead of yielding to dismay—thereby making myself and everybody else uncomfortable.

Table Arrangements.

I have in my experience found it of the greatest advantage in domestic economy always to prepare my table in such a manner that a chance guest would not mortify me or be unwelcome. It requires no extra expense, as the plainest food can as well be prepared to look nicely, and the plainest table furnishing may, by its cleanliness and neat arrangement, be made inviting. I have pitied my friends many a time when they were apologizing or bemoaning their inability to have handsome linen or other table requisites, while there was evident want of care or skill to make the best of what they already had. Neatness and good cooking will make something palatable out of the commonest material.

There will ever remain to me the happy impressions of visits made in my girlhood to an old lady who lived alone with her husband in a woodland clearing remote from any neighbor, and with fewer conveniences than belong to most laboring people. Her two cows and her chickens was their only source of revenue. Although they were aged, and past neighboring with any one, we younger members of the family were always warmly welcomed, and never since have any luxurious preparations given me half the pleasure of those simple repasts that were so hospitably offered.

The floors had no covering except the yearly renewed coat of paint, but they shone with greater perfection than many inlaid with costly tiles. The plain brick hearth swept closely back to the bed of coals, on which the teakettle hummed a sweet accompaniment in harmony with the prevailing music of perfect accord in everything. The table scoured to the nearest possible approach to white linen, since linen was wanting. Knives, forks and plain delf-ware that graced this board were like it in their spotless purity. The fare was always simple, yet so marvelously perfect of its kind that bread and butter, a dish of berries and fresh radishes were sufficient to satisfy our keenest appetites, and manifest her perfect hospitality. The cup of tea poured from the little round black teapot which was lifted from its place on the hearth with all the care the finest ware would be entitled to was deliciously odorous. With due allowance for the after-glow of youthful pleasures, when recalled in mature years, I yet feel confident that an epicure would enjoy such permission, and the accompaniments were more than we were capable of doing.

If only we looked upon the ever recurring family meals less as a stern necessity and more as a pleasant gathering place, we would find ourselves naturally making some effort toward making of it a pleasant pastime. The room itself should be free from any suggestions of its being used for other purposes; if we are compelled also to use it for a sewing room the sew-

ing and implements ought to be kept neatly together, and if possible out of sight at meal time, and if absolute necessity compels (nothing else makes it possible) that it should be used for a dressing room, no hint of such use can be tolerated when eating time comes. A comb or brush in sight would cause many a delicate stomach to revolt from anything you could offer them. If, as is sometimes the case, the men and boys who come hurriedly from their work and wash at the pump or in the basin by the kitchen door, and want to brush their hair in the same free and easy manner, they ought never to be provided for in the eating room, or kitchen, which is even worse, but in some covered porch, or better yet, in a little room at hand provided for that purpose. In fact, such a room ought to be considered a necessity wherever farmers and farm hands have to be cared for.

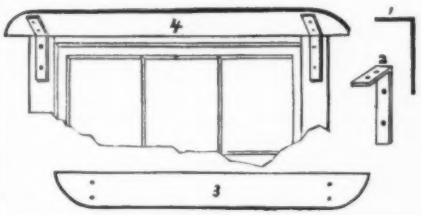
To return again to the table, where we all go oftener than to any part of the house, how can we fail to give it our careful attention; the plainest food well prepared and neatly dished and arranged, with an eye to symmetry, upon the table pleases everyone who sits down to it. The table-cloth if not nice had better not be at all—a soiled or rumpled one is offensive. In buying those for every day use it is a mistake to buy very coarse ones, even if great economy is called for, because they do not last as long as those of a closer and finer texture; they soil more easily because they will not take as good a polish from the smoothing iron, and must therefore be washed more frequently; and, moreover, just because they are coarse and common no one is particular about the care of them. As to napkins, I am inclined to think they are now almost universally used; if not, they should be, and not in common either, but each individual should be able to recognize his or her own. The silver or plated forks have also become deservedly popular as they save so much labor in scouring. The plated knife has yet, however, to make its way into general use, but I am sure it will prevail in time, because of its being so easily kept nice, and also because it makes its use for table purposes so distinctive that there is not the liability to use it in the kitchen there is with those made of steel. Great care must be taken in buying these plated articles; if you procure them from a reliable party, and get triple plate, they last with every day use ten or twelve years, whereas those bought from pedlars, or the manufacturers who do so much advertising of something good—for nothing—they may last one year, but oftener not that.

Having provided ourselves with nice things for the table, the temptation to put them away for company use, and provide common things for our own household should be resisted. Painstaking with nice things makes them last a long time, and then we will have formed good habits in that respect, and also have demonstrated our self respect and respect for those belonging to us, while at the same time rendering one of the cheap features of our home more attractive to all.

CERES.

CAKES, puddings, etc., are improved by making the currants, sugar and flour hot before using them.

A Simple Cornice for Window Draping.



Most of us attach a good deal of importance to the manner of draping our windows, and are often at a loss to follow out good ideas of our own, or borrowed ones, because of the want of a cornice to which to attach the hangings. I have so often labored under this disadvantage myself, and was so pleased with a little revolution in that line by the ingenuity of one of my daughters that I will pass it on to the Home Department. In the figure 1 is a side view of a simple iron bracket that any blacksmith will make for a few cents; the short end about four inches, the long end about six, and about one inch wide; 2 is another view of the same thing showing the screw holes in it; 3, a board the proper length, with corners rounded, which, as will be easily seen by 4, is laid upon these brackets like a shelf, when the edge is ready for anything you care to suspend from it. Lambriquins or long curtains tacked to the edge with a strip of the trimming used upon them, or a piece of the goods plaited, standing up around it, forms a pretty finish, often more happy in effect than an elaborate and expensive cornice; whereas the same finish tacked against the upper part of the window frame, as I have sometimes seen it, looks cheap and home-made. It is also better for your curtains to hang well out from the sash, as admitting of window washing without much inconvenience. If the shelf and brackets are painted to match the window frames they will hardly be observed when the curtains are not up.

CERES.

Care of the Sight.

Whatever saves time or labor in a house is so much capital laid by, so much force reserved. There is a great deal in looking ahead and providing for or guarding against possible contingencies. Thus it is wise to study the physical peculiarities of each member of the household—individual weaknesses and infirmities. Not long ago I met a lady who had in her childhood looked at different objects round her in a one-sided or peculiar way. Her prudent mother took her to different physicians and asked their opinions. But ocular science had not then advanced sufficiently and they thought there was nothing the matter. But in her womanhood being exposed to close study in a rainy season, her sight gave way and she suffered intensely. It was then found that her eyes had been astigmatic, and that under such circumstances just this trouble would be likely to occur. It is a

wise plan to have children do as little night-work, reading, study, or sewing as possible. School lessons should be prepared in day-light. But if night study is necessary wise mothers and guardians should see that the lamp used is a German student one. There are many varieties, but all I have seen are excellent, as they throw the light downward on the work, not on the eyes. In one of these use Pratt's astral oil, as safe and giving a clear steady flame. Flickering gas jets are an abomination. With the lamp and oil I have spoken of, I have known a young man whose sight was impared pursue his studies in college and seminary successfully, and afterwards take charge of a country congregation.

It is best to learn wisdom before one is taught it by bitter experience. I know a very poor Irish family who always burnt oil that most of their neighbors would have thought expensive, and in a very good lamp. The reason was they had had a narrow escape from death through poor oil and unsafe lamp. Never be above learning from any one. A very ordinary housekeeper may have acquired some knowledge in her line that you may have overlooked J. B. M. B.

Cure for Diptheria.

Messrs. Editors American Farmer:

I enclose a recipe for the cure of diptheria given by an old gentleman of Charlottesville, Va., a good many years ago, who stated that he had often known it to be tried in cases of diphtheria and never without success.

For the benefit of the many sufferers from this scourge I send it that you may give it publicity through the columns of *The American Farmer.*

RECIPE.—Take a handful of alder root, a handful of dogwood root, and a handful of the *bark* of persimmon root; boil with a pint of vinegar down to half a pint; then add a very little water, a small lump of alum, and a little honey. Use frequently as a gargle.

Essex Co., Va. WM. BAIRD.

Tanning Lamb-Skins.

Will "Ceres" please inform me how to tan lamb-skin without the wool? I wish to make it into gloves.

Answer.—Soak in strong lime water for twelve days, then rinse in clear water and scrape the wool from one side and the flesh from the other; soak again in bran water for about the same length of time, pushing it under water when it rises until it ceases to rise, then rinse again and put it into a preparation made by dissolving first a half pound of alum and half the quantity of sea salt; then have about half a pound of flour mixed with the yolks of half dozen eggs, pour the alum and salt water on this while quite warm, which ought to be about the thickness of pap; let the skin lie in this several days, taking it out occasionally to stretch it; finally take it out, rinse it, let it lie wet a few days and then stretch to dry. When dry stretch it well in every direction, and it is ready for use.

I will add that I have never tried this, but procured it from directions in a receipt book; hope it may be correct, put it seems to me a tedious process. If I can get a more simple one from other sources will give it in the future. C.

Books Received.

From *Cushing & Bailey*, Balto., "THE EASIEST WAY IN HOUSE-KEEPING AND COOKING," by Helen Campbell, published by Fords, Howard & Hulbert, New York. The title and general appearance of this new help for the house-keeper are attractive, and the table of contents shows a more comprehensive dealing with domestic matters than is usually found in books of this class. It remains for the practical house-wife to test its merits, but as one of them remarked to us, she never saw a "Cook Book" that did not contain at least one suggestion that was worth the price of the book. We are confident this one will prove worthy of the search for its own peculiarly valuable features.

"HOW WE FED THE BABY," by Dr. C. E. Page, published by Fowler & Wells, New York. This will undoubtedly be found valuable to inexperienced mothers. Even an approximation toward the carrying out of the theories so strongly advanced will be a benefit to the coming generations. Young mothers will be better employed in studying its pages than in novel reading or consultation of ordinary medical books.

Domestic Hints.

In baking bread grease the tops of loaves or dough with a little butter on the end of the finger just before putting the loaves into the oven. The crust thus treated browns nicely and stays soft even when the bread has been baked a good while.

An excellent insect powder I have found Jacoby's for roaches, ants, flies and also in cleansing beds. No one can be poisoned by it, which is a great matter, and it is easier to use than liquids.

Badly cooked potatoes I often think a cause of more dyspepsia than anything else. Wash the potatoes well, cutting off a little piece of the end of sweet ones, and put them in cold water. When the water has boiled up quickly take off the lid of the pot and pour in a little cold water, then let it boil up again, and do the same, repeating this until they are thoroughly cooked. In this way the heart of the potato is cooked. Take them out of the water at once when boiled and let them dry thoroughly on the stove. I read this in some book and have found it an excellent way. Thanks for the kind words expressed by one of the lady readers of the *Farmer* in a late number. J. B. MOORE BRISTOR.

MR. T. A. SETH'S Arawana Buttercup has a heifer calf, by Lord Rex, grandson of Rex and Filbert, for which he refused $150 the morning after she was dropped.

The American Farmer.

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*** Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

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BALTIMORE, MAY 1, 1881.

☞ Bills. ☜

We send out, in this number as is our custom, bills for subscriptions due. The amounts being small are all the more liable to be overlooked, or their payment delayed, but the aggregate is a considerable one to us and we shall consider it a favor, as well as justice to ourselves, to receive prompt responses to these reminders.

WE ARE INDEBTED to Mr. C. H. Lake for a nice specimen of Honey secured in his Perfection Box, well flavored and white. Mr. L. has now removed to his Apiary, Cor. of Greenmount Av. and John St., and persons interested are invited to call to see all the practical operations of bee-keeping exemplified.

Prospects and Preparations for the Harvest.

The reports from the growing crops are diverse if not conflicting. In some quarters the wheat crop has been materially injured by the long and severe winter, and the instances are not few where the land has been reseeded to oats; and it will be a fair statement that where wheat sown on fallow ground has come through in fair condition, that gotten in late on corn ground has suffered very much from winter-killing, and will, as a rule, be short in product, unless very favoring conditions as to season enable it to recover.

But in our best wheat producing districts, where the crop was well put in, and early enough to make sufficient growth in the fall to give it foothold through the winter, there is every reason to anticipate if not so great a crop as last year, at least a full average for this quarter. Even that which looked badly here made great improvement under the helpful influence of the warm days and stimulating showers of the last week of April, and many who considered the prospects very poor are now much encouraged by its improved appearance.

From all reports received it is evident that the acreage in wheat is this year largely above that of average years, and though there may be short crops in some parts and failures elsewhere, there seems little reason to doubt that on the whole, due largely to the great breadth seeded, the aggregate yield will come up to that of most years.

Timely preparations for the coming harvest should now be thought of by prudent farmers, and not delayed until the very moment before needed. Mistaken views of economy sometimes lead to the postponement of the selection and purchase of supplies and machines, resulting very frequently in disappointment.

Fortunately the details of preparation which formerly made the harvest so great a burden upon the farmer and his family are no longer required. Those whose memories go back to the yearly need for an army of cradlers and binders, (to say nothing of the earlier days of the sickle,) and the enormous labor in providing for them, with the onerous tax imposed in providing for them upon the mistress of the house as well as the master of the farm, may congratulate themselves that, by the ingenuity of our American mechanics, all this is spared them; and the mower and reaper, and now the final culmination of mechanical skill, the self-binder, lessens their labors and increases their profits. But if

machinery takes the place of manual labor it must be remembered that the work required of it necessitates complicated devices in construction and care in using, so that it is important for all to become acquainted with the working and capabilities of the machines they employ.

Calling in recently upon the house of Messrs. L. H. Lee & Bro., corner of Sharp and Lombard streets, the headquarters of the Champion Machines, we found them arranging and aggregating the returns from their local agents, some three hundred in number, which they required to be in by April 25th, and though all had not come to hand, these reports, which were freely exhibited to us, showed that if the crops are as good as the prospects even now seem to indicate, the sales of their various machines will be larger this year than ever before. Letters were also shown us from the main house explaining certain delays of shipments and requesting the Messrs. Lee to withhold, at least for the present, their orders on one style of machine as they are already behind on that particular pattern; and this in view of the fact that these machines are now being built at three places, the factories running at their full capacity.

Messrs. Lee & Bro. are, however, pushing forward their orders and making arrangments with their customary energy, and hope and expect to be prepared for all demands. But considering the fact that that in 1880 they were short some five hundred machines of one style, and that the breadth in grain to be cut this season is far above the average, it is the part of wisdom and prudence for farmers who intend purchasing machines to order them at once, and thus make sure of getting such kinds as they want, and in time.

Food Adulterations.

At a recent meeting of the Potomac Fruit Growers Mr. Geo. T. Angel, of Boston, Mass., addressed the Society on the above named topic; and as he had devoted many years to the investigation of the matter he spoke advisedly in substance as follows:

Bread is adulterated with alum and the sulphate of copper. *Yeast* with alum. *Baking Powders* with alum, terra alba, plaster of paris, whiting and kaolin. *Milk* with water, chalk and a variety of substances. *Cheese* with potatos, beans, oleomargerine, vermillion, red chalk, sulphate of copper, arsenic and corrosive sublimate. *Lard* with starch, alum and quick-lime. *Confectionery* with chromate of lead, vermillion, red lead, Prussian blue, copper and arsenic. *Pickles* with sulphuric acid and verdigris. *Mustard* with yellow ochre and chromate of lead. *Vinegar* with sulphuric acid, arsenic and corrosive sublimate. *Coffee* with acorns, spent tan bark, logwood, sawdust, and the burnt livers of horses. *Teas* with Prussian blue, chromate of lead, the leaves of other shrubs, etc., etc. "The brands of teas sold in America are unknown in China."—*Chinese Minister at Washington.*

Drugs.—The adulterations of these are perfectly abominable, and often the medicine has only a quarter of the strength it should have.—*A Boston Chemist.*

Wall Papers.—Thirty three per cent. of wall papers are poisonous.—*Chemists of Harvard University.*

Tinware and Tin Cans are so much adulterated by lead (mixed with the tin in manufacturing) that if all the chemists in the country were each paid a fee of $10,000 to keep dark and say nothing, the makers would still have a surplus of $4,000,000 of profit per annum. Don't use anything put up in tin cans.

Glucose is made by millions of tons; and even Southern planters, who can buy glucose for three cents a pound, find it profitable to mix it with their sugar. It is true that glucose pure and simple is grape sugar; but as made at these establishments it contains a per centage of sulphuric acid, and is therefore a poison.

Oleomargerine is a twin giant to glucose—some 100,000,000 of pounds were made in this country during 1880. It is made of the fat of animals, and not infrequently from animals who have died from disease; and in its manufacture is not subject to heat sufficient to kill the living oaganisms which refuse fat is liable to contain.—*Dollinger, the English Microscopist.*

NOTE BY THE REPORTER.—Any work on Chemistry will contain information how to test any of the poisons in articles of food, etc.; and the curious can decide for themselves as to the purity of the food they purchase.

Washington, D. C. G. F. NEEDHAM.

Napthaline.

In a recent number of your journal I reported Prof. Taylor's discovery of the fact that this substance was an insectide. As the article may not be on sale at the druggists, I have obtained from Prof. Taylor the method of making it, as follows:

Procure the crude napthaline, which may be had for little or nothing, at any establishment where they make "the dead oil of tar," put this into an iron pot and apply heat. The pure napthaline in flaky crystals will pass off, which may be caught in a chamber, say a large box.

Washington, D. C. G. F. N.

BALTIMORE CO. FARMERS' CONVENTION.—This meeting will be held on the County Fair Grounds at Timonium on Thursday, May 19. A number of subjects will be discussed of interest to the farmers of the county, and several gentlemen have been invited to deliver addresses or read papers, among them Dr. M. G. Ellzey, late Professor of agriculture at the Virginia Agricultural College; Prof. P. B. Wilson, of Baltimore; and C. K. Harrison, Esq., of Baltimore county A large attendance is expected.

HENDERSON'S HAND-BOOK OF PLANTS, by Peter Henderson, pp. 410, price $3.00. This is a work on a plan unique in the literature of American horticulture. It is arranged in the form of a cyclopædia, and besides descriptions of plants contains directions for their cultivation. A comprehensive glossary of botanical and technical terms is annexed; the volume constituting one which for reference will be alike valuable to the student and the practical cultivator. The author deserves great credit for this fruit of his experience and labors.

Baltimore Markets—May 2.

Breadstuffs.—*Flour.* The market is firm and steady. We quote: Howard Street Super $3 25 @ 3 75; do do Extra $4 25 @ 5 00; do do Family 5 25 @ 6 25; Western Super 3.25 @ 4 00; do Extra 4 00 @ 5.00; do Family 5 25@6 25; City Mills Super 3 50 @ 4 00; do do Extra 4 50 @ 5.25; do do Rio brands Extra 6.25 @ 6,50; Spring Wheat Family 5.25 @ 6.00; Minnesota Patent 7.00@7 50; Patapsco Family 7.00; do Extra 6.80; Chesapeake Extra 6.60; Fancy brands 6.40 @ 6.80; Fine 3,25 @ 3.50; Rye Flour 5.00@5 50.

Wheat.—The market is steady. We quote Western $1.22½ for spot; 1.20⅝ @ 1.21⅛ for May; 1.20 @ 1.20⅝ for June; 1.16 @ 1.16⅛ for July; Southern, 1.18 @ 1.25 for Fults; 1.25 @ 1.30 for long berry.

Corn.—The market is quiet. Southern, white, 55½ cts; yellow, 55½ cts.; Western mixed, 56 cts; Steamer, 53 cts.

Oats.—We quote Western mixed at 46 cts. The market is about steady.

Rye.—We quote Maryland at $1 15, Pennsylvania at $1.18. The market is a little easier.

Hay and Straw.—Straw is high and firm. We quote: Choice Cecil County Timothy $24 @ 26; fair to prime Md. and Pa. Timothy $22 50 @ 24; Western $23 @ 24; Mixed $23@24; Clover $21 @ 22. Wheat Straw $14; Oat do $15@16; Rye do $22@23. Loose Hay $21@26.

Mill Feed.—We write the market quiet. We quote Western at $17 @ 19, with City Mills Middlings and Brownstuffs at $20 per ton.

Provisions.—The market in the West is steady. The home market is steady also, and shows no change in price. We quote Shoulders, D. S., 8¼cts.; L. C. Sides, do 9⅜ cts.; C. R. Sides, do 9⅛ cts.; Bacon Shoulders 7⅛ cts.; do C. R. Sides 10¼ cts.; do Hams, sugar cured new, 11⅛ @ 12 cts.; do Shoulders, sugar cured, 8 @ 8¼ cts.; do Breasts, 10@10¼ cts. Lard in tierces 12¼ cts. Mess Pork, new, ₱ bbl. $19.00 *Butter.*—The market is easy all around. We quote Western Creamery, fancy, 35@36 cts.; N. Y. State, choice, new, 27 @ 29 cts.; Western packed, prime to choice, 23 @ 25 cts.; do do good to prime, 19 @ 23 cts.; Western, roll, 22 @ 24 cts.; nearby roll, 15 @ 20 cts. *Eggs* —The market is weak at 15 cts. *Cheese* —The market is steady. We quote Eastern Factory, fancy 14 @ 14⅜ cts.; Eastern choice 13⅜ @ 14 cts; do good to prime, 12⅜ @ 13 cts.; Western good to prime 12 @ 12⅜ cts.; do fair to good 8 @ 10 cts; do skim 3 @ 5 cts.

Live Stock.—*Beef Cattle.*—The market was quite slow this week, very best on sale 6¼ @ 6⅜ cts.; that generally rated first quality, 5⅝ @ 6¼ cts.; medium or good fair quality 4½@5⅜ cts; ordinary thin Steers, Oxen and Cows 3 @ 4 cts.; extreme range of prices 3 @ 6 9-5 cts.; most the sales were from 5¼ @ 6. *Milch Cows.*—Prices $20 @ $45 at wholesale. *Hogs* —Prices 7⅛ @ 8¼. Trade is not active. *Sheep and Lambs.*—Trade was confined to the home demand this week. We quote Clipped Sheep 4 @ 5¾ cts.; Wool Sheep 4¾ @ 6⅛ cts.; Lambs 7@10 cts.

A SAFE AND SURE means of restoring the youthful color of the hair is furnished by Parker's Hair Balsam, which is deservedly popular from its superior cleanliness. *

Contents of May Number.

FOOD FOR THE BRAIN AND NERVES that will invigorate the body without intoxicating is what we need in these days of rush and worry. Parker's Ginger Tonic restores the vital energies, soothes the nerves and brings good health quicker than anything you can use. *Tribune.* See other column. *

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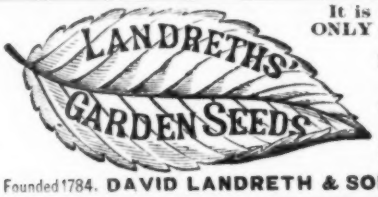

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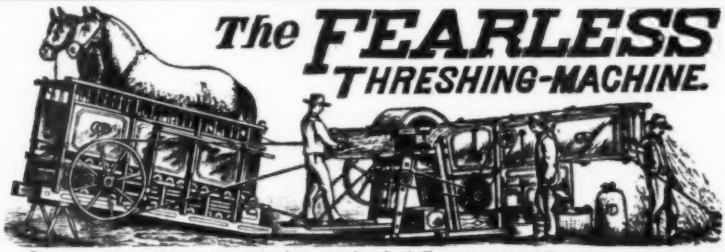

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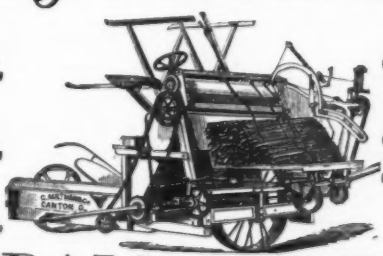

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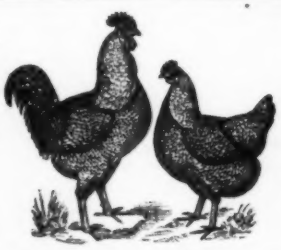

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